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TERRITORY OF ALASKA
DEPARTMENT OF EDUCATION

MANUAL

AND

COURSE OF STUDY

FOR THE

HIGH SCHOOLS OF ALASKA

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ISSUED BY
LESTER D. HENDERSON, COMMISSIONER OF EDUCATION
JUNEAU, ALASKA
1922

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FOREWORD.

It is the aim of this manual to unify and standardize the work of the high schools of the Territory. The publication is for the use of administrators, high school teachers and school boards. No attempt has been made to cover all phases of high school administration and instruction. The material presented is sufficiently complete, however, to be of much assistance to administrators and teachers in organizing and conducting the work of the high school.

The department of education does not have at its disposal a group of educational experts who can be called upon to assist in the preparation of a manual and course of study for high schools. State courses of study and literature bearing upon the subject of the high school curriculum and the various phases of high school administration, therefore, have been freely used and quotations therefrom will appear throughout this publication.

It is expected that the work as outlined will be somewhat strictly adhered to. Permitted options are sufficiently numerous to render the course adaptable to practically any local need. Small schools should guard against the tendency to attempt too ambitious a program. The difference between the large and the small high school should lie in the scope of the work attempted rather than in the quality or quantity of the work done. The student who studies algebra or European history in a two-teacher high school should cover as much of the subject and be as well grounded in the work as he would be in a high school with a force of eight teachers.

The attention of all high school teachers is directed especially to the discussion of the aims of the high school and to the marking system recommended.

A list of library books is presented in the back part of this Manual. It is not as comprehensive as could have been prepared, but it should nevertheless serve as a useful guide in the establishment of serviceable and effective libraries.

LESTER D. HENDERSON,
Commissioner of Educaton

THE AIMS OF THE HIGH SCHOOL.

The aims and objectives of the high school will influence to a very large extent the subject matter which will be presented. The traditional high school was considered as existing largely for the purpose of preparing students to enter college. Its curriculum, therefore, was extremely rigid and was formulated to meet the needs of those who expected to pursue higher courses. The college preparatory function of the high school has now dropped from a position of major to one of minor importance. Personal and social needs of students should now govern the high school course and the manner and method of presenting subjects. Those responsible for the formulation of courses should be influenced largely by the fact that about one pupil is graduated from high school out of nine who entered the first grade, and that of those entering high school about one third fail to reach the second year, about one-half drop out before the third year and fewer than one-third are graduated. The individual programs of the half who stay only two years in high school should be as much a matter of concern to high school administrators as the program of those who remain for the entire four years of work.

Due to superior economic as well as other conditions the mortality rate among Alaska high school students is not so great as for the nation as a whole. Nevertheless the number of students who fail to enter high school and who do not complete the course of study when once they enter is sufficiently large to present a real problem.

A number of attempts to formulate basic educational aims have been made.

The N. E. A. Committee on the Reorganization of Secondary Education enumerates seven aims: (1) Health; (2) Command of fundamental processes; (3) Worthy home membership; (4) Vocation; (5) Citizenship; (6) Worthy use of leisure; (7) Ethical Character.

The Ohio State Department of Education, after a complete survey of the best thought on the subject. enumerates six objectives as follows: (1) Health, (2) Vocation, (3) Home, (4) Citizenship, (5) Leisure, (6) Character. We quote the following from "Ohio High School Standards" in explanation of these objectives

and commend them to high school teachers as worthy of serious study and consideration. The quotation is largely a reprint of U. S. Bureau of Education Bulletin, 1918, No. 35:

1. Health.—Health needs cannot be neglected during the period of secondary education without serious danger to the individual and the race. The secondary school should therefore provide health instruction, inculcate health habits, organize an effective program of physical activities, regard health needs in planning work and play, and cooperate with home and community in safe-guarding and promoting health interests.

To carry out such a program it is necessary to arouse the public to recognize that the health needs of young people are of vital importance to society, to secure teachers competent to ascertain and meet the needs of individual pupils and able to inculcate in the entire student body a love for clean sport, to furnish adequate equipment for physical activities, and to make the school building, its rooms and surroundings, conform to the best standards of hygiene and sanitation.

2. Vocation.—Vocational education should equip the individual to secure a livelihood for himself and those dependent on him, to serve society well through his vocation, to maintain the right relationship toward his fellow workers and society, and, as far as possible, to find in that vocation his own best development.

This ideal demands that the pupil explore his own capacities and aptitudes, and make a survey of the world's work, to the end that he may select his vocation wisely. Hence, an effective program of vocational guidance in the secondary school is essential.

Vocational education should aim to develop an appreciation of the significance of the vocation to the community, and a clear conception of right relations between the members of the chosen vocation, between different vocational groups, between employer and employee, and between producer and consumer. These aspects of vocational education, heretofore neglected, demand emphatic attention.

The extent to which the secondary school should offer training for a specific vocation depends upon the vocation, the facilities that the school can acquire, and the opportunity that the pupil may have to obtain such training later. To obtain satisfactory results those proficient in that vocation should be employed as instructors and the actual conditions of the vocation should be utilized either within the high school or in cooperation with the home, farm, shop, office. Much of the pupil's time will be required to produce such efficiency.

3. Home.—Worthy home-membership as an objective calls for the development of those qualities that make the individual a worthy member of a family, both contributing to and deriving benefit from that membership.

This objective applies to both boys and girls. The social studies should deal with the home as a fundamental social institution and clarify its relation to the wider interests outside. Literature should interpret and idealize the human elements that go to make the home. Music and art should result in more beautiful homes and in greater joy therein. The co-educational school with a faculty of men and women should, in its organization and its activities, exemplify wholesome relations between boys and girls and men and women.

Home membership as an objective should not be thought of solely with reference to future duties. These are the better guaran-

teed if the school helps the pupils to take the right attitude toward present home responsibilities and interprets to them the contribution of the home to their development.

In the education of every high-school girl, the household arts should have a prominent place because of their importance to the girl herself and to others whose welfare will be directly in her keeping. The attention now devoted to this phase of education is inadequate, and especially so for girls preparing for occupations not related to the household arts and for girls planning for higher institutions. The majority of girls who enter wage-earning occupations directly from the high school remain in them for only a few years, after which home making becomes their lifelong occupation. For them the high-school period offers the only assured opportunity to prepare for that lifelong occupation, and it is during this period that they are most likely to form their ideals of life's duties and responsibilities.

In the education of boys, some opportunity should be found to give them a basis for the intelligent appreciation of the value of the well-appointed home and of the labor and skill required to maintain such a home, to the end that they may cooperate more effectively. For instance, they should understand the essentials of food values, of sanitation, and of household budgets.

4. Citizenship.—Civic education should develop in the individual those qualities whereby he will act well his part as a member of neighborhood, town or city, state and nation, and give him a basis for understanding international problems.

For such citizenship the following are essential: A many-sided interest in the welfare of the communities to which one belongs; loyalty to ideals of civic righteousness; practical knowledge of social agencies and institutions; good judgment as to means and methods that will promote one social end without defeating others; and, as putting all these into effect, habits of cordial cooperation in social undertakings.

The school should develop the concept that the civic duties of men and women, while in part identical, are also in part supplementary. Differentiation in civic activities is to be encouraged, but not to the extent of loss of interest in the common problems with which all should cope.

Among the means for developing attitudes and habits important in a democracy are the assignment of projects and problems to groups of pupils for cooperative solution, and the socialized recitation whereby the class as a whole develops a sense of collective responsibility. Both of these devices give training in collective thinking. Moreover, the democratic organization and administration of the school itself, as well as the cooperative relations of pupil and teacher, pupil and pupil, and teacher and teacher, are indispensable.

While all subjects should contribute to good citizenship, the social studies—geography, history, civics and economics—should have this as their dominant aim. Too frequently, however, does mere information, conventional in value and remote in its bearing, make up the content of the social studies. History should so treat the growth of institutions that their value may be appreciated. Geography should show the interdependence of men while it shows their common dependence on nature. Civics should concern itself less with constitutional questions and remote governmental functions, and should direct attention to social agencies close at hand and to the informal activities of daily life that regard and seek the common good. Such agencies as child-welfare organizations and

consumers' leagues afford specific opportunities for the expression of civic qualities by the older pupils.

The work in English should kindle social ideals and give insight into social conditions and into personal character as related to these conditions. Hence the emphasis by the committee on English on the importance of a knowledge of social activities, social movements and social needs on the part of the teacher of English.

The comprehension of the ideals of American democracy and loyalty to them should be a prominent aim of civic education. The pupil should feel that he will be responsible, in cooperation with others, for keeping the Nation true to the best inherited conceptions of democracy, and he should also realize that democracy itself is an ideal to be wrought out by his own and succeeding generations.

Civic education should consider other nations also. As a people we should try to understand their aspirations and ideals that we may deal more sympathetically and intelligently with the immigrant coming to our shores, and have a basis for a wiser and more sympathetic approach to international problems. Our pupils should learn that each nation, at least potentially, has something of worth to contribute to civilization and that humanity would be incomplete without that contribution. This means a study of specific nations, their achievements and possibilities, not ignoring their limitations. Such a study of dissimilar contributions in the light of the ideal of human brotherhood should help to establish a genuine internationalism, free from sentimentality, founded on fact, and actually operative in the affairs of nations.

5. Leisure.—Education should equip the individual to secure from his leisure re-creation of body, mind, and spirit, and the enrichment and enlargement of his personality.

This objective calls for the ability to utilize the common means of enjoyment, such as music, art, literature, drama, and social intercourse, together with the fostering in each individual of one or more special avocational interests.

Heretofore the high school has given little conscious attention to this objective. It has so exclusively sought intellectual discipline that it has seldom treated literature, art and music so as to evoke right emotional response and produce positive enjoyment. Its presentation of science should aim, in part, to arouse a genuine appreciation of nature.

The school has failed also to organize and direct the social activities of young people as it should. One of the surest ways in which to prepare pupils worthily to utilize leisure in adult life is by guiding and directing their use of leisure in youth. The school should, therefore, see that adequate recreation is provided both within the school and by other proper agencies in the community. The school, however, has a unique opportunity in this field because it includes in its membership representatives from all classes of society and consequently is able through social relationships to establish bonds of friendship and common understanding that can not be furnished by other agencies. Moreover, the school can so organize recreational activities that they will contribute simultaneously to other ends of education, as in the case of the school pageant or festival.

6. Character.—In a democratic society ethical character becomes paramount among the objectives of the secondary school. Among the means for developing character may be mentioned the wise selection of content and methods of instruction in all subjects of study, the social contacts of pupils with one another and with

their teachers, the opportunities afforded by the organization and administration of the school for the development on the part of pupils of the sense of personal responsibility and initiative, and, above all, the spirit of service and the principles of true democracy which should permeate the entire school—principal, teachers and pupils.

EDUCATIONAL AND VOCATIONAL GUIDANCE

If the aims of the high school are to be realized the student must receive educational and vocational guidance from the day of his entrance upon the work which the high school curriculum affords. Ability and willingness to guide are two of the indispensable prerequisites of a worth-while high school teacher. One of the large purposes of the high school is to help boys and girls find themselves. The school has failed if a student completes the course of study without having discovered what line of study he can pursue most effectively and economically, and in what direction his natural aptitudes lie.

Educational guidance is as necessary for the student who will drop out of school at the end of the first or second year as for those who will graduate and pursue higher educational courses. Not all boys and girls who enter high school are mentally equipped to receive what the high school has to offer. If it is possible to determine with reasonable reliability that a pupil will remain in high school one year, two years or three years, it becomes necessary to select courses for him which will send him into life as completely prepared as possible—more completely prepared than he would have been if he had followed the traditional curriculum with no variations. At the same time one must not lose sight of the fact that aptitudes often develop slowly. The transition from the elementary to the high school is rapid and students confronted with an array of new subjects and a changed method of administration are sometimes slow in finding themselves. (The junior high school assists greatly in lessening the mortality rate at this period.) Under such circumstances it is well to so guide students as to prevent such intensive specialization in the first two years that the last two years do not leave them an opportunity to build in the direction of college or some other desired end. Situations occasionally arise where students who have devoted fifty or sixty per cent of their time to commercial and industrial subjects apply for admission to liberal arts colleges with disappointing results.

John M. Brewer, Director of Harvard University's Bureau of Vocational Guidance, defines guidance, as "enlightenment and advice leading to self-direction. Guidance relates to intellectual life, culture, future vocation, citizenship, moral problems, recreation, social behavior, co-operative activity and the like." This

writer also distinguishes three groups of students who may be found in the average high school: first, those who feel that they must have vocational education; second, those who have decided upon their calling but wish to continue their general education; third, those whose general education should be continued because they have not reached any decision. To quote further from the same writer:

> Their choices are founded in many cases upon the merest whim. They rush into vocational courses on the basis of a second or a third preference rather than a first, and they are led into decisions by means of the worst forms of false guidance. No one who has studied the problem of children's choices, unless he is an adherent of intellectual aristocracy, and therefore does not believe in universal education, can justify a neglect of educational and vocational guidance.

Guidance for a vocation is now recognized as a legitimate part of the program of the modern high school. The merits or drawbacks of an occupation need no longer be judged through hearsay or tradition. It is possible to secure such information on the various occupations as will enable the student to determine their bearing on the health, personal development and economic well being of those who follow them.

By vocational guidance it is not to be understood that the school shall decide for young people what occupation they should follow. True vocational guidance provides only for that organization of school work whirh shall result in "pupil self-discovery—discovery which helps the pupil to realize what his own capacities, aptitudes, and interests are—so that he gains information about the character and conditions of various kinds of occupational life; thus putting the two together he may arrive at a wise vocational decision."

SUPERVISED STUDY

To state that high school students rarely learn to study during their four years of work is but repeating what has become almost axiomatic. Despite this fact the attention which the subject receives in the average high school is very limited. The department urges upon high school administrators the necessity for definite attention to the cultivation of proper methods of study.

Hall Quest in his book, "Supervised Study" defines the term as follows:

> Supervised study is that plan of school procedure whereby each pupil is so adequately instructed and directed in the methods of studying and thinking that his daily preparation will progress under conditions most favorable to a hygienic, economical, and self-reliant career of intellectual endeavor. It seeks to prepare pupils not simply for high school graduation or courses in higher education, but to an even greater extent for successful coping with problems

in a world of intense competition, where superior achievement depends on initiative, clear thinking, and confidence in one's ability to organize experience for new adjustments.

The following books will be found helpful in organizing and directing the study of high school students: "Supervised Study" by Hall Quest (Macmillan); "How to Study and What to Study" by Sandwick (D. C. Heath); "How to Study Effectively" by Whipple (Public School Publishing Company); and "Teaching to Think" by Boraas (Macmillan).

THE PROJECT METHOD

The term "project" was first used by the United States Department of Agriculture as an outlined plan for carrying on a piece of co-operative work. The word has now become a common part of educational nomenclature. The "project method" is one of the tools for use in realizing the aims of the high school which the secondary school instructor cannot well afford to overlook. Stevenson in "The Project Method of Teaching" defines the term and discusses it as follows:

> A project is a problematic act carried to completion in its natural setting. This definition provides for an act carried to completion as over against the passive absorption of information, and for the development of the problematic situation demanding reasoning rather than merely the memorizing of information. By emphasizing the problematic aspect it implies the priority of the problem over the statement of the principles and it makes provision for the natural setting of problems as over against an artificial setting.
>
> An analysis of the definitions of projects by teachers of general educational theory, agriculture, science, industrial education, and English in primary and elementary grades, shows wide variations in meaning. Most of the definitions make provision for the problematic act and few for carrying the act to completion. Although the natural setting for the problems is frequently implied, it is seldom specially stated or discussed.
>
> The question that must be answered in determining whether the setting is artificial or natural is this: Is the problem, which is demanding solution, different, due to the fact that it is undertaken in school, from what it would be were it to arise in life outside the school? In other words is the problem presented for solution by schoolroom practice essentially different from that found in life outside the school? If the solution is carried on in the same way in school then the problem has a "natural setting" even though it is being solved in school.
>
> The provision for the natural setting of the teaching situation is the distinct contribution of the project method. Without the natural setting there is no project.

High school teachers are referred to the following books for a complete discussion of this subject and for suggestions in the working out of projects: "The Project Method of Teaching" by Stevenson (Macmillan); "Project Work in Education" by Stockton (Macmillan); and "The Redirection of High School Instruction" by Lull and Wilson (Lippincott).

THE SOCIALIZED RECITATION

The socialized recitation has been very generally used by upper intermediate grades and junior high school teachers. There is no reason why the method is not as applicable to the work of the senior high school. Its principal function consists in destroying the old conception of the teacher as a taskmaster and that of the pupil as one who commits certain things to memory and reproduces them at the command of that educational autocrat. The socialized recitation provides a condition in which students may prepare for social efficiency by conducting themselves as social beings. The following quotations from an article in the School Review (17:255) define this type of recitation:

After having taught history in the high school for six years I determined to have the courage of my convictions for one year at least, and to give my pupils a fair chance to take the responsibility of their work and to do it in their own way. Up to this time I had conducted my lessons in the usual way. I had planned the lesson beforehand, collected what illustrative material I could, and in the class had asked the questions, explained the difficulties, and carried the burden of work on my shoulders. The pupils had answered the questions but rarely asked any and had had no chance to get the real benefit of being responsible for the continuity and progress of the work nor to plan, investigate or discuss it on their own account. I determined that the class should be a social group of young people and should have an opportunity to do just those things, i. e., to cooperate -to work together—and to give each individual a chance to do anything which he particularly wanted to do. * * * *

It was surprising to see the change in the whole atmosphere of the recitations which this order of things brought about. The pupils were timid at first and I trembled for the result, but after a lesson or two they became used to it and the work went on with far more ease and spirit than I had dared hope it would. * * * *

There were all sorts of unexpected interesting developments as the work went on. Whenever difficulties arose we solved them together. My opinion was considered of no more importance than theirs. When we did not agree I urged them to try their way so that they might have confidence in their own judgment if they succeeded or see its weakness if they failed. Sometimes they elected officers who were not efficient and who bungled matters uncomfortably. Th pupils suffered immediately and got some pointed lessons in civil government, at first hand.

ACCREDITED HIGH SCHOOLS

An accredited high school is one which has been inspected by the Commissioner of Educaton and found to offer the required curriculum with an adequate faculty, adequate facilities for instruction, and with that general intellectual and moral tone which are the marks of an efficiently organized and conducted school. A

fully accredited four-year high school must meet the standards usually maintained in similar institutions throughout the United States.

The University of Washington has agreed to place on its accredited list all four-year Alaska high schools which have been inspected by the Commissioner of Education and which are recommended by him as doing standard work. Graduates from all such high schools are admitted to the University of Washington and other universities and colleges of the United States without examination.

High schools offering less than four years of work and which meet the requirements may be accredited by the Commissioner of Education for one, two or three years. They shall be known as standard one, two, or three year high schools as distinguished from four year accredited high schools.

STANDARDS GOVERNING THE ACCREDITING OF ALASKA HIGH SCHOOLS

1. No high school shall be accredited which does not require at least fifteen units for graduation, all of which shall be taken from the regular course of study as outlined by the Commissioner of Education. (A unit or credit is given for the completion of a subject of five recitations or their equivalent laboratory periods per week, pursued throughout a school year of not less than thirty-six weeks.)

2. All recitation periods, for classes of ten or more pupils, shall be at least forty-five minutes in length; for classes of not less than six or more than ten, at least forty minutes in length. Recitation periods of less than forty minutes must be approved by the Commissioner of Education. Two periods of laboratory work shall be considered of equal instructional value with one period of recitation. Schools adopting the supervised study plan should provide for recitation periods of not less than sixty minutes.

3. No high school shall be accredited which does not have at least three teachers giving their entire time to instruction and administration. The superintendent or principal may have time for supervising the work of teachers.

4. The minimum scholastic training of teachers of academic subjects in accredited four-year high schools shall be the completion of a standard college course.

5. Teachers of special subjects are required to possess such scholastic training as shall fit them to give instruction in the subjects which they present. Such subjects as music, art, manual training, household economics, physical education, commercial subjects, or such others as may be determined by the Commissioner of Education are to be considered as special subjects.

6. No high school shall be accredited in any community in which the standard of scholastic training required of teachers in the elementary school is not at least the completion of a four year high school course and one year in an approved normal or college with special attention to preparation for teaching.

7. No high school shall be accredited unitl in the opinion of the Commissioner of Education ample and suitable provision has been made for the proper education of the children in the elementary schools both as regards equipment and number and quality of the teaching force.

8. The number of daily periods of classroom instruction for each teacher shall not exceed six; Provided that a laboratory recitation of two periods shall be considered as the equivalent of one regular period of classroom instruction.

9. The laboratory and library facilities of accredited high schools shall be adequate to the needs of instruction in the subjects taught.

10. No high school shall be accredited which does not have at least twenty students enrolled in grades nine to twelve inclusive.

11. The location and construction of the building; the lighting, heating and ventilation of the rooms; the nature of laboratories, desks, apparatus, maps and illustrative material; and the general sanitary condition of the building and grounds shall be taken into consideration in placing any high school on the accredited list.

12. Every curriculum in accredited high schools shall involve the completion of at least two majors of three units each and two minors of two units each. The following will be deemed satisfactory major groups:

3 units of English
3 units of foreign language
3 units of mathematics
3 units of social science
3 units of natural science.

Two units from any one of the foregoing groups of studies shall constitute a minor.

STANDARD ONE, TWO, AND THREE YEAR HIGH SCHOOLS

Following are the standards for three, two, and one-year high schools. The purpose of accrediting such high schools is that those completing the courses may have had an opportunity to do standard high school work and thus be admitted, without examination, to standard high schools, either in the Territory or the States, offering more advanced work.

Standards for these high schools are the same as those for four-year schools except as noted below:

Three-Year High Schools

1. Required units for completion of course, twelve.
2. Number of teachers giving their entire time to the work of instruction and supervision, two.
3. No definite requirement regarding enorllment.
4. Every curriculum shall contain one major of three units and at least two minors of two units each. Major and minor groups as listed under four-year accredited high schools are acceptable.

Two-Year High Schools

1. Required units for completion of course, eight.
2. Number of teachers giving their entire time to the work of instruction, one.
3. No requirement regarding enrollment.
4. Two minors of two units each shall be required in all curriculums.

One-Year High Schools

1. Required units for completion of course, four.
2. Number of teachers in whole system, at least two, one of whom shall give at least one-half time to the work of instruction in the high school.

GENERAL REQUIREMENTS AND SUGGESTIONS

1. All courses of study in high school, whether one, two, three or four year high schools, must be approved by the Commissioner of Education.

2. Four regular full unit subjects provide sufficient work for the average high school student. Students who are strong both physically and mentally, and who are well grounded in their general school work are sometimes able to carry a heavier course, altho this practice should be discouraged. Under no conditions should a student take more than five full unit subjects in one school year.

3. It is preferable to defer the study of early European history until the Tenth Grade, since by so doing pupils are better able to grasp the subject and are yet able to complete the full three-year course in history.

4. A high school should offer only such subjects as its facilities and teaching force will permit. A good elementary school and two years of standard high school work will fit a pupil for life to a much higher degree than will a weak elementary school and a weak four year high school course.

5. It is not well for a high school having the minimum requirement of teachers to attempt too extensive a course of study.

6. High schools which are offering but one, two or three years of work but which have a sufficient enrollment to warrant the addition of another year should plan their course accordingly during the year prior to such addition.

7. Science classes should meet for at least seven periods in each week, thus providing for two double period recitations in laboratory work weekly.

8. Manual training, home economics, typewriting, bookkeeping and other classes in which no particular preparation outside of the class-room is required, should meet for a double period five times each week if one full unit is to be given for the work. Where manual training or home economics are offered but two or three days in each week, one-half unit only shall be given. Where such subjects as book-keeping and typewriting are offered for but one period each day, one-half unit only shall be given. All other classes meet five periods per week.

9. No more than two units shall be allowed for work in each of the following subjects: Manual training, domestic science, typewriting, bookkeeping. Not more than one unit shall be allowed for work. in each of the following subjects: Music, physical education.

10. Credit shall not be allowed for physics or chemistry if given before the third year of the course nor shall credit be allowed for United States history and civics if given before the third year of the course, except where the student may have taken the subject while in a two-year high school.

11. No credit shall be given for a semester of work in a one year subject.

12. No course of study offering a foreign language will be approved unless at least two units of that language are provided for. If, however, a student has completed satisfactorily one unit of a foreign language and in the judgment of the superintendent or principal he would not profit by further study of the subject, the unit completed may be credited toward the units required for graduation. In no case can this be permitted to occur with more than one language.

13. Accurate and complete records of attendance together with the class standing of all students should be kept, and in such form as to be conveniently referred to and safely preserved. Loose leaf record books such as those prepared by the S. Y. Gillan Co. are recommended.

14. No student having a grade of less than "B" in the majority of subjects, according to the marking system recommended below, should be certified to a university or college as capable of doing standard work.

MARKING SYSTEM

A uniform marking system is recommended for all high schools. Massachusetts has worked out some excellent suggestions on marking as follows:

The use of percentages, or of any numerical scale, should be discarded for the reason that it is not possible to indicate degrees of attainment with anything approaching mathematical precision, and for the further reason that the notion that a student should be promoted when, and only when, he has accomplished 7/10, or any other portion of the work fails to take into account the types of material involved. Some facts, principles and relations must be mastered absolutely as tools. Partial knowledge will not avail. Other ideas are valuable but not pivotal. Furthermore, knowledge is only one of five attributes to be inculcated. Habits, powers, interests, and ideals are of equal if not greater importance, but they cannot be measured in percentages.

To be satisfactory a system of marks should answer the following questions:

Is the attainment in the subject—

(1) Of high excellence? Such as is ordinarily secured by about 5 to 10 per cent of a class.

(2) Good and satisfactory? This ordinarily should mean work above the average. It means a grade which would warrant the school in certificating the work for college entrance.

(3) Such that the pupil may wisely proceed in the subject? This may be called a qualifying mark. In the case of subjects in which a thorough foundation must be secured in order that the pupil may undertake the work of the next year with reasonable success, this mark should not be given unless the work is distinctly good.

Even if a pupil has not mastered a subject so well that he may wisely proceed in that subject, it may be that he has acquired certain educational results, valuable for him, on account of which he shall be given a passing mark. Many failures today are due to the belief on the part of the teacher that the pupil has not reached a standard such that he should take the next year's work in that particular subject. However, a pupil should have some kind of credit for a course in which he has made an honest and sustained effort, and from which he personally has derived real benefit in terms of his own development.

Consequently in case a negative answer must be given to the three preceding questions, the fourth question should be—

(4) Has the pupil secured results in his own education such that he should have passing credit for the course, even though he should not continue the subject?

A pupil of good native ability in any particular subject could not receive this mark in that subject, for if he applied himself diligently he would receive at least a qualifying mark.

It should be noted at this point that question (4) is radically different from the first three questions. It relates to the progress of the pupil in terms of his own personal development. The pupil of larger ability should be required to apply himself no less diligently than the pupil of lesser ability. The school has a right to expect honest effort from each and every pupil, but it has no right to expect that all the pupils can reach the same standard of achievement. The first three questions ignore personal differences

in ability, and are therefore objective, while the fourth question is subjective.

The following system of marks meets the above requirements and is therefore recommended:

A—Superior work.
B—Good work.
C—Fair work, entitling the pupil to proceed in that subject.
X—Entitling the pupil to credit, but not entitling him to proceed in that subject.
F—Failure.

COURSES OF STUDY

The majority of high schools will employ not more than three teachers. Many school systems will offer one, two, or three years of high school work with fewer than three high school teachers. Each high school will find it necesary to guard against attempting too ambitious a program. The temptation to offer many courses and a wide range of choice in subjects must be resisted. Thoroughness of the work accomplished and not the space which the curriculum offers when set down on paper determines the rank of a high school.

None of the Alaska high schools are in a position to offer a large variety of courses. Neither is it essential that high schools have a large number of courses labelled "classical course," "scientific course," "commercial course," "college entrance course," "general course," etc. Under present conditions almost all courses of standard high school grade may be used for entrance to a large number of colleges and universities. The University of Washington for example admits to Freshman standing any recommended graduate of a four-year accredited high school who presents fifteen units of credit distriuted as follows: 3 units of English; 1 unit of algebra; 1 unit of plane geomettry; 3 units in any one of the following groups: (a) foreign language, either ancient or modern (or 2 units if three units of mathematics are presented); (b) history, civics, economics; (c) physics, chemistry, botany, zoology, general biology, physical geography, geology, physiology; 2 units in subjects presented in the above groups (a)-(c); 5 units selected from subjects accepted by an approved high school for its diploma. From this it will be seen that 10 units are required to be selected from a wide range of specified subjects, while 5 may be chosen from the school's own curriculum.

The University of California provides that any graduate of an accredited high school of the State of California may enter the university. Graduates from accredited high schools outside the State are admitted if their grades are of the required standing. The University of Idaho admits to Freshman standing graduates of accredited four-lear high schools who have included in their

course 3 units of English, 2 units of mathematics (algebra, one and geometry, one), 2 units of natural or physical science, and 2 units of history or political science—9 required units in all out of 16 which must be submitted for entrance.

From the foregoing, it will be noted that any school may offer a wide range of commercial or vocational subjects and still qualify students for university entrance. As previously indicated, however, the aim of the high school course of study is primarily to prepare high school pupils for the duties and responsibilities of citizenship and incidentally to follow more advanced lines of study in higher institutions of learning.

The department is suggesting four courses of study for the larger high schools. High schools which employ the minimum number of teachers, three, should not attempt to offer the entire commercial course or to offer more science than can be well presented. For the small high school one foreign language is better than two. One unit of laboratory science well done is better than two indifferently presented.

The difference between the large and the small high school should lie in the scope of the work attempted rather than in the quality or quantity of the work done. United States history and civics should be taught equally well in all high schools. The student who studies algebra in a two-teacher high school should cover as much of the subject and be as well grounded in the work as he would be in a high school with a force of eight teachers. The same thing may be said of the two-year high school. The work of the two years presented should be equal in value to that of the first two years in any high school of the entire Territory.

The rigid single track curriculum has had its day. The same is also true of the purely elective system. High school administrators are coming to realize that while the modern high school must provide a curriculum which must make allowance for the varying ability, needs and interests of pupils, it also must be so constructed that whichever course the student may elect, he will find therein an arrangement of studies that is purposeful and of real educational value. The courses which the department is suggesting, therefore, contain a number of required studies and as wide a range of electives as it is felt can well be attempted even by the large high schools of the Territory. A diploma of graduation from high school must mean more than that the student has spent four years in high school and made a passing mark in fifteen units of work.

COURSES OF STUDY FOR FOUR-YEAR ACRREDITED HIGH SCHOOLS

YEAR	CLASSICAL COURSE	SCIENTIFIC COURSE	ENGLISH COURSE	COMMERCIAL COURSE
FIRST YEAR	English .....(5) Algebra .....(5) Latin .....(5) Elective .....(5)	English .....(5) Algebra .....(5) General Science .....(5) Elective .....(5)	English .....(5) Algebra .....(5) General Science .....(5) Elective .....(5)	English .....(5) Algebra .....(5) Comm. Arith. 1st Semester .....(5) Comm. Geog. 2nd Semester .....(5) Elective .....(5)
SECOND YEAR	English .....(5) Geometry .....(5) Latin .....(5) Elective .....(5)	English .....(5) Geometry .....(5) Biology .....(7) Elective .....(5)	English .....(5) Geometry .....(5) Early European History .....(5) Elective .....(5)	English .....(5) Geometry .....(5) Bookkeeping .....(10) Elective .....(5)
THIRD YEAR	English .....(5) Latin or Modern Language .....(5) Elective .....(5) Elective .....(5)	English .....(5) Physics .....(7) Modern Language .....(5) Elective .....(5)	English .....(5) Modern European History .....(5) Elective .....(5) Elective .....(5)	English .....(5) Shorthand and Typewriting .....(10) Advanced Bookkeeping .....(10) or an Elective .....(5) Elective .....(5)
FOURTH YEAR	English .....(5) U. S. History and Civics .....(5) Latin or Modern Language .....(5) Physics or Chemistry..(7)	English .....(5) U. S. History and Civics .....(5) Chemistry .....(7) Modern Language .....(5)	English .....(5) U. S. History and Civics .....(5) Physics or Chemistry..(7) Elective .....(5)	English .....(5) Advanced Shorthand and Typewriting ....(10) Commercial Law 1st Semester .....(5) Economics 2nd Semester .....(5) U. S. History and Civics .....(5)

NOTE: Figures placed after each subject indicate the number of recitation periods per week.

ONE-TEACHER COURSE

It is not possible for one teacher to present thoroughly more than two years of high school work. This can be done only by alternating subjects from year to year, and by offering only certain specified subjects with no opportunity for election on the part of students. Forty-minute recitation periods are ample. The following course is recommended:

Subjects Offered Each Year

FIRST YEAR	SECOND YEAR
English	English
Early European History	Modern European History

Subjects Taught to Both First and Second Year Students in Alternate Years

EVEN YEARS	ODD YEARS
Commercial Arith. 1st Semester	Algebra
Commercial Geog. 2nd Semester	Bookkeeping
General Science.	

TWO-TEACHER FOUR-YEAR COURSE

Two teachers can present three years of work very effectively. It is, however, difficult to arrange a four-year course of study that can be presented by two teachers. Such a course can, of necessity, offer no elective subjects and must be made up chiefly of academic subjects. Alternation of subjects from year to year is also necessary.

Following is a curriculum recommended for a two-teacher four-year high school:

FIRST YEAR

FIRST SEMESTER	SECOND SEMESTER
English I	English II
Algebra I	Algebra II
General Science I	General Science II
(a) Commercial Arith.	Commercial Geog.

SECOND YEAR

English III	English IV
Geometry I	Geometry II
Early European History I	Early European History II
(a) Bookkeeping I	Bookkeeping II

THIRD YEAR

(b) English V	English VI
(c) Modern European History I	Modern European History II
(d) Biology I	Biology II
Latin I	Latin II

FOURTH YEAR

(b) English VII	English VIII
(c) U. S. History	Civics
(d) Physics I or Advanced Algebra	Physics II or Solid Geometry
Latin III	Latin IV

The two subjects marked (a) are to be alternated, one being presented in even and the other in odd-numbered years. The same is true also of those marked (b), (c) and (d). This leaves 12 subjects yearly to be presented by two teachers. The above course meets university entrance requirements. Students should be confined to the study of the various subjects in the year of the course in which the subject is a regular or an alternate subject. It will be noted that the alternation of subjects is confined almost entirely to the third and fourth years where students have settled definitely into the swing of high school work. Too much alternation of subjects in the first two years is not desirable. Latin may be omitted and electives listed in the course of study for third and fourth year students substituted.

THREE-TEACHER FOUR-YEAR COURSE

With three teachers on the high school faculty it is possible to offer a wider range of subjects with fewer alternations than indicated in the foregoing course. The following program of work is recommended. Three-teacher high schools will find it necessary to guard against attempting to offer too ambitious a program. There will be a tendency to inaugurate new lines of work in years when a peculiarly desirable combination of teachers are employed which cannot be followed up when a change in the high school faculty takes place. It will be best therefore for three-teacher high schools to follow a definite program of work from year to year. The following is recommended:

FIRST SEMESTER	SECOND SEMESTER
FIRST YEAR	
Required:	Required:
English I	English II
Algebra I	Algebra II
General Science I	General Science II
Elective:	Elective:
Latin I	Latin II
(a) Commercial Arith.	Commercial Geog.
Manual Training I	Manual Training II
Domestic Science I	Domestic Science II
SECOND YEAR	
Required:	Required:
English III	English IV
Plane Geometry I	Plane Geometry II
Early European History I	Early European History II
Elective:	Elective:
Latin III	Latin IV
(a) Bookkeeping I	Bookkeeping II
Manual Training I	Manual Training II
Domestic Science I	Domestic Science II
THIRD YEAR	
Required:	Required:
(c) English V	English VI
(b) Modern European History I	Modern European History II

Elective:	Elective:
(d) Advanced Algebra	Solid Geometry
Modern Language I	Modern Language II
(e) Biology I	Biology II
Shorthand I	Shorthand II
Typewriting I	Typewriting II

FOURTH YEAR

Required:	Required:
(c) English VII	English VIII
(b) U. S. History	Civics
Elective:	Elective:
Modern Language III	Modern Language IV
(e) Physics I	Physics II
(d) Commercial Law	Economics
Shorthand III	Shorthand IV
Typewriting III	Typewriting IV

As with the two-teacher course, the foregoing course provides for alternation of subjects thus enabling three teachers to offer the entire twenty-two units with a minimum of seventeen units in any one school year. The course provides for but one year each in manual training and domestic science. These subjects are elective in the Freshman and Sophomore years. As with other courses it is recommended that students be confined to the study of the various subjects in the year in which they are either regular or alternate subjects. It will hardly be possible for schools to offer both the stenographic course and courses in manual training and domestic science unless elementary school teachers are utilized.

THE JUNIOR HIGH SCHOOL

The foregoing courses are arranged for schools which are organized on the 8-4 plan since this type of organization still characterizes the majority of schools. The department, however, thoroughly approves of organization on the 6-6 plan with six years devoted to elementary school work and with grades 7, 8, and 9 organized as a unit under the name junior high school and with grades 10, 11, and 12 organized as a senior high school.

The most important characteristics of the junior high school type of organization may be summarized briefly as follows:

(1) It lessens the break between the high and the elementary school by permitting the introduction into junior high schools of modified high school methods and management and bridges the gap which occurs between the eighth grade and the high school when the natural tendencies of the adolescent might pull him away from school.

(2) It permits of promotion by subject rather than by grade and thus takes into account exceptional tendencies on the part of individual students in the seventh and eighth grades.

(3) It makes for more efficient teaching by permitting readily the introduction of departmental work. Teachers are not required to be masters of many subjects. Departmental work has an added advantage from the standpoint of the student in that it tends to break the monotony of the single teacher classroom.

(4) It permits of better direction of the social instincts of the adolescent boy and girl.

(5) It makes possible the introduction of elective subjects at an age when this opportunity for election should be given and permits of better administration of supervised study, physical education, and vocational lines of work.

The size of the average Alaska school, however, precludes organizaton of junior high schools with any large list of electives. The subject matter of the junior high school curriculum cannot vary to any great extent from the traditional work of the seventh, eighth and ninth grades. However the other benefits of this type of school organization may be secured by even the smaller schools.

VOCATIONAL GUIDANCE

The course of study in vocational guidance should begin in the eighth grade and should include the following activities:

1. Collect and arrange in usable, convenient form, the school record of each pupil. This record is to be used in the selection of studies and in the teaching and management of the pupil. The record will reveal much regarding the capacity and disposition of the student both to himself and to his teacher.

2. Have each pupil tell orally and in writing, as English work, what vocation or vocations he would like to follow, the nature of the vocation, why he prefers it, and what aptitude he thinks he has for it. Compare this with his school record.

3. Teach pupils how to study effectively and how to prepare their lessons in the most effective way. Textbooks dealing with this subject are listed at the conclusion of the discussion on Supervised Study. Keep a record of gain in time, quality and quantity of work done. In these experiments the pupil and teacher should have two aims: (a) to find better methods of study; (b) to find what the pupil can learn most effectively and economically.

NINTH GRADE

Continue the work outlined for the eighth grade. If vocational guidance is not offered in the eighth grade, some time should be devoted to the work outlined above at the beginning of the year. Teaching pupils how to study and systematic supervision of study should continue throughout the high school.

Have each pupil begin to plan his vocational career, even

altho it is expected that with more knowledge and experience his plans will change. The principal work of the year consists in a study of some of the chief local vocations. The following outline for the study of a vocation, taken from Bulletin 1918, No. 24, Bureau of Education, is recommended for use.

OUTLINE FOR THE STUDY OF A VOCATION

I. General statement concerning the vocation:
   1. Value of the vocation as a social service.
   2. Duties of one engaged in it.
   3. Number engaged in it in local community.
   4. Relative number engaged in it in general, with its probable future development.
   5. Relative capital invested in it.

II. Personal qualities demanded:
   1. Qualities of manner, temperament, character.
   2. Mental ability.
   3. Physical demands.

III. Preparation required:
   1. General education.
   2. Special or vocational education.
   3. Apprenticeship conditions.
   4. Experience required.

IV. Wages earned by workers:
   1. Range of wages made (table showing distribution of all cases).
   2. Average wage per week.
   3. Relation of wage to length of experience and preparation

V. Length of working season, working week, working day, etc.

VI. Health of the workers:
   1. Healthful or unhealthful conditions.
   2. Dangers, accidents, or risks.

VII. Opportunities for employment:
   1. In local community.
   2. In general.

VIII. Organization of the industry, including the relations of the worker to his fellow workers, his employers, and the community.

IX. Status of the workers:
   1. Opportunities for advancement.
   2. Time for recreation and enjoyment.
   3. Adequate income for recreation and the comforts of life.
   4. Any other items of peculiar interest in this connection.

X. Biographies of leaders in the vocation.

TENTH, ELEVENTH AND TWELFTH GRADES

The following bulletins of the U. S. Bureau of Education are recommended as a guide for the study of vocational education in the second, third and fourth years of the high school:

Bulletin, 1914. No. 14.

Bulletin, 1918. Nos. 19 and 24.

The following program is suggested for these years:

1. An intensive study of the major government activities in Alaska with a view to giving students a clear insight into the opportunities afforded by these fields of work, as follows:

(a) Bureau of Fisheries.
(b) Forestry Service.
(c) Bureau of Public Roads.
(d) U. S. Customs Service.
(e) U. S. Land Office.
(f) U. S. Biological Survey.
(g) Agricultural Experiment Stations.

2. A brief study of the world's work.
3. Study of non-local vocations in general after the plan of outline for the study of local vocations in the ninth grade.
4. Studying and testing the pupil's possibilities.
5. Guidance with reference to preparation for a vocation.

ENGLISH

The best thought on the subject of English is summarized in a recent publication of the U. S. Bureau of Education, Bulletin, 1917, No 2, entitled, "Reorganization of English in Secondary Schools." This publication is a report of the Joint Committee on the Reorganization of English appointed by the National Education Association and the National Council of Teachers of English. A copy should be in the hands of each English teacher. The following paragraphs are taken from this bulletin. Copies of the Fourth Report of the Inland Empire Council of Teachers of English. (1920) entitled, "Minimum Requirements in the Mechanics of English Composition" have been distributed to all schools by the department. Additional copies and subsequent reports may be obtained from The Inter-Mountain Educator, Missoula, Montana.

AIMS OF THE ENGLISH COURSE

Stated broadly, it should be the purpose of every English teacher, first, to quicken the spirit and kindle the imagination of his pupils, open up to them the potential significance and beauty of life, and develop habits of weighing and judging human conduct and of turning to books for entertainment, instruction, and inspiration as the hours of leisure may permit; second, to supply the pupils with an effective tool of thought and of expression for use in their public and private life, i. e., the best command of language which, under the circumstances, can be given them.

The particular results to be sought in the English course may be more definitely outlined as follows:

I. In general, the immediate aim of high school English is two-fold:

(a) To give the pupils command of the art of communication in speech and in writing.

(b) To teach them to read thoughtfully and with appreciation, to form in them a taste for good reading, and to teach them how to find books that are worth while.

These two aims are fundamental; they must be kept in mind in planning the whole course and applied in the teaching of every year.

II. Expression in speech includes:

(a) Ability to answer clearly, briefly, and exactly a question on which one has the necessary information.

(b) Ability to collect and organize material for oral discourse on subjects of common interest.

(c) Ability to present with dignity and effectiveness to a class, club, or group material already organized.

(d) Ability to join in an informal discussion, contributing one's share of information or opinion, without wandering from the point and without discourtesy to others.

(e) For those who have, or hope to develop, qualities of leadership, ability, after suitable preparation and practice, to address an audience or conduct a public meeting with proper dignity and formality, but without stiffness or embarrassment.

(f) Ability to read aloud in such a way as to convey to the hearers the writer's thought and spirit and to interest them in the matter presented.

III. Expression in writing includes:

(a) Ability to write a courteous letter according to the forms in general use and of the degree of formality or informality appropriate to the occasion.

(b) Ability to compose on the first draft a clear and readable paragraph, or series of paragraphs, on familiar subject matter, with due observance of unity and order and with some specific detail.

(c) Ability to analyze and present in outline form the gist of a lecture or piece of literature and to write an expansion of such an outline.

(d) Ability, with due time for study and preparation, to plan and work out a clear, well-ordered, and interesting report of some length upon one's special interests—literary, scientific, commercial, or what not.

(e) For those who have literary tastes or ambitions, ability to write a short story, or other bit of imaginative composition, with some vigor and personality of style and in proper form to be submitted for publication, and to arrange suitable stories in form for dramatic presentation.

IV. Knowledge of books and power to read them thoughtfully and with appreciation includes:

(a) Ability to find pleasure in reading books by the better authors, both standard and contemporary, with an increasing knowledge of such books and increasing ability to distinguish what is really good from what is trivial and weak.

(b) Knowledge of a few of the greatest authors, their lives, their chief works, and the reasons for their importance in their own age and in ours.

(c) Understanding of the leading features in structure and style of the main literary types, such as novels, dramas, essays, lyric poems.

(d) Skill in the following three kinds of reading and knowledge of when to use each:

(1) Cursory reading, to cover a great deal of ground, getting quickly at essentials.

(2) Careful reading, to master the book, with exact understanding of its meaning and implications.

(3) Consultation, to trace quickly and accurately a particular fact by means of indexes, guides, and reference books.

(e) The habit of weighing, line by line, passages of especial significance, while reading other parts of the book but once.

(f) The power to enter imaginatively into the thought of an author, interpreting his meaning in the light of one's own experience, and to show, perhaps, by selecting passages and reading them aloud that the book is a source of intellectual enjoyment.

V. The kinds of skill enumerated above are taught for three fundamental reasons:

(a) Cultural. To open to the pupil new and higher forms of pleasure.

(b) Vocational. To fit the student for the highest success in a chosen calling.

(c) Social and ethical. To present to the student noble ideals, aid in the formation of his character, and make him more efficient and actively interested in his relations with and service to others in the community and in the Nation.

THE SPECIFIC AIMS OF LITERATURE TEACHING

1. The literature lesson should broaden, deepen, and enrich the imaginative and emotional life of the student. Literature is primarily a revelation and an interpretation of life: it pictures from century to century the growth of the human spirit. It should be the constant aim of the English teacher to lead pupils so to read that they find their own lives imaged in this larger life, and attain slowly, from a clearer appreciation of human nature, a deeper and truer understanding of themselves.

2. The study of literature should arouse in the minds of pupils an admiration for great personalities, both of authors and characters in literature. No man is higher than his ideals. Human beings grow unconsciously in the direction of that which they admire. Teachers of English must, then, consciously work to raise the pupils' standards of what is true and fine in men and women. The literature lesson must furnish the material out of which may be created worthy and lasting ideals of life and conduct.

3. The literature lesson should raise the plane of enjoyment in reading to progressively higher levels. Reading is still the chief recreation of many people. It should be the aim of the English teacher to make it an unfailing resource and joy in the lives of all. To make it yield the greatest pleasure will involve the consideration of literature not only as to its content as a statement of facts and ideas but as an art The literature teacher should not be content with arousing an interest in what is said; if he would give the fullest enjoyment, he must develop some appreciation of the way in which it is said.

4. In order that the reading habit may yield the pleasure and joy of which it is capable, the English lesson should give to the student such knowledge of the scope and content of literature as will leave him with a sense of abundance of interesting material, and a trained ability and desire to find for himself such intellectual and spiritual food as he may need for his growth and his pleasure.

5. In order that the above ends may be realized, the teacher of literature must assume his part in the conscious development of the intellectual faculties of his students. They must be trained not

only to feel more sensitively and deeply, and to imagine more vividly, but to think more accurately and intelligently, that they may have the power not only of correct interpretation but of sane and wise application to life of the literature to which it is the duty of the teacher to lead them.

SCHOOL ACTIVITIES AS AIDS IN TEACHING LITERATURE

Probably no other department of a high-school faculty is so often called upon to assist in all branches of school activities, save only athletics, as the English department, and although such work on shoulders already heavily laden, there is justification for it in the fact that no other work of the school may be so benefited by them. The following, when properly developed, are of unquestionable value to the literature teacher:

1. The school library. This is as important to the English teacher as the laboratory is to the teacher of science. The smallest school should have the nucleus of a library, and there should be a regular yearly appropriation for increasing it. The library should be made the most beautiful room in the building, breathing an atmosphere of refinement and culture. The wise English teacher works hand in hand with the school librarian, informing her of her plans and desires for her students, and enlisting her ready cooperation. Many a skillful librarian, by her apparently chance comment in a seemingly idle moment, has enticed an unwilling student to a reading list when all but sheer force has failed with the teacher. Relations should be established with the nearest public library for loan collections of books and pictures. Acquaintance should also be made with the town librarian, especially where there is no school library, and her interest and cooperation enlisted.

2. Literary societies. These flourish best away from large schools and centers of population. A little group of more thoughtful pupils, reading with an enthusiastic teacher, may get a great deal of pleasure and profit. In rural schools, too small to support many societies, these may expand into a literary-dramatic school club, which, if carefully led, may do much for school and students alike.

3. The dramatic club. The dramatic society and the school play may be either a great benefit to the school or a great nuisance. The dangers are jealousy and quarrelsomeness among the students; friction with the school authorities; undue expenditure of time; unworthy standards, resulting in tawdriness. vulgarity, cheap professionalism; and, in some schools, extravagance and personal display. The benefits may be realization of what makes for dramatic value; unification of school spirit and loyalty; inclusion in the school activities of nonathletic pupils; meeting of pupils and teachers on a common basis of endeavor; character training through both acting, which is subordinating oneself to the character presented, and the work behind the scenes, which is subordinating oneself to the public success of others or of a large project. There will be further advantages if the plays chosen are of literary merit, so as to deserve a permanent place in the actors' memories, to give them permanent standards of dramatic judgment, of character, of action, of speech.

4. The school paper. School journalism is another form of student activity that (in its reaction not only on the editors but on the school) may be a vital force for good in English work, and on this account deserves the friendly cooperation of some interested teacher.

PURPOSES OF TEACHING COMPOSITION

The purpose of teaching composition is to enable the pupil to speak and write correctly, convincingly, and interestingly. The first step toward efficiency in the use of language is the cultivation of earnestness and sincerity; the second is the development of accuracy and correctness; the third is the arousing of individuality and artistic consciousness.

A definite point of view must be kept in mind by the teacher if this general aim is to be realized; that point of view is that he must meet the needs of the individual pupil. The development of the expressional powers of the individual pupil should be the aim of the teacher rather than the teaching of specific form and rules. Each year of a pupil's life brings a broader outlook through added experience and more mature thought. Each year, consequently, there is need for an increased mastery of technique and of more mature forms of expression. Only from a realization on the part of the teacher of this growth of personality can an adequate course in composition be organized.

Such individual treatment requires that each pupil do much writing and speaking on subjects familiar to him. If material for oral and written work is taken from the experience of the pupil, familiarity with the subject will enable him (a) to give attention to correctness rather than to the mastery of the thought, (b) to write or speak convincingly by reason of his own interest, (c) to give some attention to the arrangement and presentation of his thoughts in a manner likely to arouse interest in others.

The classroom activities in teaching composition when arranged in the order of their importance are: (a) Letter writing; (b) relating of some simple incidents and explanation of familiar subjects; (c) analysis of pieces of writing; (d) reports; (e) literary composition; (f) debate.

Letter writing is placed first as being of most importance, since it is the form of writing the pupil will use most frequently. The pupil should be able to write a courteous letter according to the forms in general use, and of the degree of formality or informality appropriate to the occasion. Second in order of importance is exposition. The second aim, then, is to train the pupil to compose a clear and readable paragraph or series of paragraphs on familiar subject matter, with due observance of unity and order and with some specific details. Third, is the ability to analyze and present in outline form the gist of a lecture or piece of literature, and to expand such an outline. The fourth aim comes when the pupil is more mature and has developed in power of expression. He should be able with due time for study and preparation, to plan and work out a clear, well-ordered and interesting report of some length upon his special interests—literary, scientific, commercial, or what not. These four aims should be kept in mind for all pupils. Other aims should be kept in mind for those who have special aptitudes: for those who have the argumentative mind, ability to arrange the material for a debate in an effective way; for those who have literary tastes, ability to write a short story or other bit of imaginative composition, with some vigor and personality of style and in proper form to be submitted for publication, and to arrange suitable stories in form for dramatic presentation.

CLASSROOM ACTIVITIES

Classroom activities in composition should be founded upon and should grow out of the experiences of the pupils. These experiences may be classified as follows:

1. Those that school life provides:
   (a) School work.
   (b) School activities, social and athletic.
2. Those that outside interests provide:
   (a) Work—past, present, and future.
   (b) Amusements, play.
   (c) Interests in the home.
   (d) Other interests, as travel and local industries.
   (e) Reading.

School work itself furnishes a vast amount of material for composition. Heretofore there has been a tendency to base much of the theme work on the English classics. The introduction of the sciences and of vocational training, however, has made a great amount of material growing out of the actual experience of the pupils available. There is a growing tendency to use this material and to reduce greatly the amount of composition work based on the classics.

All theme work should be made as real and vital as possible. The following examples illustrate how school work may be adapted to this purpose and suggest methods of giving practice in different types of discourse. A pupil makes a field trip with his geography class; this trip furnishes more vital narrative material than "A visit to England at the time of Ivanhoe;" it is fresher material even than "Last year's fishing trip." Another visits a big chemical factory; extreme interest in the subject will tend to produce a good description of the factory. A third becomes interested in radium in the physics class. He reads all that he can find and assembles his knowledge in a good exposition. A senior has devoted some time to deciding what he will do after he leaves the high school. An argument in defense of his decision, whether for a certain college or for a certain vocation, has at its basis the mental experience of the pupil himself.

Outside interests—play, amusements, work, home activities, reading—will furnish a vast amount of material if the teacher is able to direct the pupils to it. The sports furnish good subjects; for instance, a talk on "Swimming" might be given by the boy who takes the prizes in the contests; or on "How to win a foot race," by the boy who won a race in a field-day contest. In general, subjects should be suggested, not assigned.

Not only should the activities on which composition is based be real, not only should they touch the life of the pupil in some way through interest or experience, but the exercises themselves should have, as far as possible, a purpose. Much of the work in English may be used for definite ends in the school itself. A school paper and an annual furnish means of presenting the best poems, stories, and editorials produced in the English classes. By skillful management the local newspapers may be induced to publish some of these exercises. In large cities a report of school athletics is made for the local papers every week by pupils, who often receive remuneration. Programs may be arranged for the presentation before the school of the class work in English. Speeches of acceptance at the awarding of medals for various sports may be given as class exercises; and so may the after-dinner speeches for class banquets.

GRADE IX.

COMPOSITION, GRAMMAR AND SPELLING:

Recommended text—"Sentence and Theme" by Ward—Scott, Foresman and Co. In composition, stress Description.

LITERATURE FOR CLASS STUDY:

Select any three including one drama.

Ivanhoe—Scott.
Stikeen, The Story of a Dog—Muir.
Representative Short Stories—Macmillan Co.
Treasure Island—Stevenson.
Merchant of Venice—Shakespeare.
Julius Caesar—Shakespeare.

Select any three—

Lady of the Lake—Scott.
The Vision of Sir Launfal—Lowell.
Prisoner of Chillon and Other Poems—Byron.
Ancient Mariner—Coleridge.
Portions of Iliad and Odyssey—Bryant's translation.
Ballads and Ballad Poetry—Hale.

CURRENT EVENTS:

Study regularly at least one standard weekly or monthly magazine.

NOTE: The teacher should keep clearly in mind that the chief aim of literature study is to lead pupils to like what is being read and to stimulate them to further reading. No classic should be studied too analytically; there is too much danger of creating a distate for the very books that should be appreciated. On that ground Ivanhoe should be completed in from fifteen to eighteen lessons; Julius Caesar in from eight to ten; the Lady of the Lake in from twelve to fifteen.

It is not necessary that an entire book be read in class. Much of it should be read outside and discussed in class. If the teacher sees that the students have become interested and may safely be depended upon to complete the book outside, let some other book be taken up in class. The class should study as many classics as can be read without making the reading superficial.

INDIVIDUAL COLLATERAL READING:

(At least five selected from the following list.)

Alcott: Little Women.
Antin: The Promised Land.
Churchill: The Crisis.
Clemens: Tom Sawyer; Connecticut Yankee in King Arthur's Court.
Cooper: The Last of the Mohicans; The Spy.
Dana: Two Years Before the Mast.
Defoe: Robinson Crusoe.
Dickens: Oliver Twist; Old Curiosity Shop.
Doyle: The Adventures of Sherlock Holmes.
Fox: Little Shepherd of Kingdom Come.
Irving: Tales of a Traveler.
Kingsley: Westward Ho!
Mitchell: Hugh Wynne.
Muir: Boyhood and Youth.
Page: Red Rock.
Parkman: The Oregon Trail.

Porter: Freckles; Girl of the Limberlost.
Porter: Pollyanna.
Rideino: Boyhood of Famous Authors.
Rolfe: Shakespeare, the Boy.
Stevenson: Kidnapped; Black Arrow.
Thompson-Seton: Wild Animals That I Have Known.
Young: Alaska Days with John Muir.
Wallace: Ben Hur.
Warner: Being a Boy.
Wiggin: Rebecca of Sunnybrook Farm.

NOTE: Oral or written reports on two of the books read should be required of all students. Avoid long reviews. It is much better to have the student's honest opinion of the book backed up by reasons for his opinion.

GRADE X.

COMPOSITION, GRAMMAR AND SPELLING:

Recommended Text—"Theme Building," by Ward-Scott, Foresman & Co. "Word Study for High Schools," by Swan-Macmillan Co.

In composition, stress Narration.

LITERATURE FOR CLASS STUDY:

Select any three including one drama:

Silas Marner—Eliot.
Les Miserables (abridged)—Hugo.
A Tale of Two Cities—Dickens.
Little Rivers and Other Essays—Van Dyke.
As You Like It—Shakespeare.
The Tempest—Shakespeare.

Select any three:

Tales of a Wayside Inn—Longfellow (selections).
Enoch Arden—Tennyson.
The Blue Bird—Maeterlinck.
Macbeth—Shakespeare.
Studies in Nature and Literature—Burroughs (Riverside Literature Series.)

CURRENT EVENTS:

Study regularly at least one standard weekly or monthly magazine.

INDIVIDUAL COLLATERAL READING:

(At least five selected from the folllowing list. Oral or written class reports on at least two.)

Addams: Twenty Years at Hull House.
Bacheller: Eben Holden.
Blackmore: Lorna Doone.
Burroughs: Camping and Tramping with Roosevelt.
Churchill: The Crossing; Richard Carvel.
Clemens: Innocents Abroad.
Connor: The Man from Glengarry.
Doyle: The White Company.

Duncan: Dr. Luke of Labrador.
Davis: Our English Cousins.
Fox: The Trail of the Lonesome Pine.
Franck: A Vagabond Journey Around the World.
Gaskell: Cranford.
Jackson: Ramona.
Keller: Story of My Life.
Maeterlinck: The Life of the Bee.
Norris: The Pit.
Palmer: Life of Alice Treeman Palmer.
Richards: Florence Nightingale.
Riis: The Making of an American; How the Other Half Lives.
Roosevelt: Hunting Trips of a Ranchman.
Stuck: 10,000 Miles with a Dog Sled.
Smith: The Master Diver.
Tarkington: A Gentleman from Indiana; Monsieur Beaucaire.
Thackeray: Letters to an American Family.
Wallace: The Wood Carver of 'Lympus.
White: The Blazed Trail.
Wister: The Virginian.
Wright: The Winning of Barbara Worth.

GRADE XI.

COMPOSITION AND RHETORIC:

Recommended text—"Practical English for High Schools" by Lewis and Hosic—American Book Co.

In composition, stress Exposition. Emphasis falls upon Chapter VIII. Study such parts of Chapters I to VII as are needed for a review of principles and of Description and Narration.

ENGLISH LITERATURE:

Recommended text—"English Literature with Readings" by Pace-Allyn & Bacon.
"English Literature" by Long-Ginn and Company and "Century Readings in English Literature" by Cunliffe, Pyre, Young-Century Co.—in hands of the teacher.

LITERATURE FOR CLASS STUDY:

Selections from the Readings in the text. The following are recommended as a minimum requirement for class study:

Il Penseroso;
Lycidas; extracts from
The Tatler and The Spectator;
The Village Preacher and The Schoolmaster from,
The Deserted Village;
Elegy in a Country Church Yard;
The Bull Fight and Waterloo from Child's Harold;
Ode to the West Wind;
The Cloud;
To a Skylark;
Ode to a Grecian Urn;
The Eve of St. Agnes;
Memorial Verses;
The Fall of Sohrab.

Students should be led to read all selections.

Select any four including one drama:

Selected Essays of Elia—Lamb.
Idylls of the King—Tennyson.
Ode on the Intimations of Mortality, and Other Poems—Wordsworth.
Hamlet—Shakespeare.
She Stoops to Conquer—Goldsmith.
Essay on Johnson; and Essay on Goldsmith—Macaulay.
Essay on Burns (and Selected Poems by Burns)—Carlyle.
The Pied Piper of Hamelin, Cavalier Tunes and Other Poems—Browning.

NOTE: The foregoing classics are all listed in the Riverside Series.

CURRENT EVENTS:

Study regularly at least one standard weekly or monthly magazine.

INDIVIDUAL COLLATERAL READING:

(At least five selected from the following list. Oral or written reports on two.)

Barrie: Margaret Ogilvy.
Bryce: The Pleasantness of American Life.
Bulwer-Lytton: Richelieu.
Carlyle: Heroes and Hero Worship.
Deland: The Iron Woman.
Dickens: Our Mutual Friend; Bleak House.
Eliot: The Mill on the Floss; Romola.
Hutchinson: If Winter Comes.
Ibsen: The Doll's House.
Johnson: To Have and to Hold.
Goldsmith: The Vicar of Wakefield.
Kennedy: The Servant in the House.
Kipling: The Light That Failed.
Page: The Old South.
Parker: The Right of Way; The Seats of the Mighty.
Muir: Travels in Alaska.
Pope: The Rape of the Lock.
Sheridan: The Rivals; Under the Deodars.
Steele: On the Face of the Waters.
Thackeray: Henry Esmond; Vanity Fair.
Van Dyke: The Blue Flower.
Wells: Mr. Britling Sees It Through.
Zangwill: The Melting Pot.

GRADE XII.

COMPOSITION AND RHETORIC:

Recommended Text: "Practical English for High Schools"—Lewis and Hosic. "Argumentation and Debate"—Baker & Huntington—Ginn & Company. In composition, stress Argumentation. Emphasis falls upon Chapter IX. Emphasize, also, Chapter XI, XII and XIII of the regular text.

AMERICAN LITERATURE:

Recommended text—American Literature with Readings,—by Pace—Allyn & Bacon. American Literature, by Long—Ginn & Company, in the hands of the teacher.

LITERATURE FOR CLASS STUDY:

Selections from the Readings in the text. The following are recommended: Thanatopsis; To a Waterfowl; A Forest Hymn; The Death of the Flowers; Robert of Lincoln; The American Flag; The Building of the Ship; The Birds of Killingworth; The Hanging of the Crane; Lowell's poems and essays; The New South; Skipper Ireson's Ride; Laus Deo!; In School Days; The Last Occasion; O Captain! My Captain!; When Lilacs last in the Dooryard Bloom'd; The Last Leaf; The Chambered Nautilus; The Deacon's Masterpiece; Selections from the Autocrat of the Breakfast Table.

Select any four:

Essays from the Sketch Book—Irving.
Autobiography—Franklin.
The Gettysburg Speech, Address at Cooper Union, etc.—Lincoln (Riverside Series).
The Raven, Fall of the House of Usher, and Other Poems and Tales—Poe (Riverside Series).
Self Reliance and Other Essays—Emerson.
Tanglewood Tales—Hawthorne.

NOTE: The foregoing classics are listed in the Riverside Series.

CURRENT EVENTS:

Study regularly at least one standard weekly or monthly magazine.

INDIVIDUAL COLLATERAL READING:

(Any five selected from the following list. Oral or written reports on two.)

Bangs: Houseboat on the Styx.
Bronte: Jane Eyre.
Cable: Old Creole Days.
Clemens: Innocents Abroad; Life on the Mississippi.
Davis, Richard Harding: Van Bibber and Others.
Dunbar, Paul L.: Lyrics of the Hearthside, The Bar Sinister.
Duncan: Dr. Luke of Labrador.
Harris, Joel C.: Tales of Home Folks.
Harte, Bret: Poems and Stories (Riverside Series).
Hawthorne: The Scarlet Letter; Marble Faun.
Holland, J. G.: Bitter Sweet.
Holmes: Elsie Venner.
Howells: The Rise of Silas Lapham.
Hutchinson: The Happy Warrior.

Jackson, Helen H.: Ramona.
Jewett, Sarah Orne: A White Heron and Other Stories.
Lytton: Last Days of Pompeii.
Miller, Joaquin: Songs of the Sierras.
O'Henry: Options; The Four Million.
Page: Marse Chan; Meh Lady.
Reade: Cloister and the Hearth.
Roosevelt: The Strenuous Life; The Winning of the West.
Tarkington: Seventeen.
Van Dyke: The Ruling Passion.
Warner: In the Wilderness.
Webster: Orations and Debates.

FRENCH AND SPANISH

(Reprinted from Idaho Course.)

The purpose of a two-year French or Spanish course is to teach the pupil:

1. A good working vocabulary, active and passive. By active vocabulary is meant one that is mastered for actual practical use; by passive, one that is recognized by the eye and ear, but is not used in actual speech. The combination of the two gives the pupil an extensive knowledge of foreign words and phrases.

2. To pronounce correctly and intelligently. This is not to be done thru mere imitation of the teacher, but thru a serious study of the physiological basis of the sounds, and by continuous practice;

3. To express himself in simple idiomatic language. To accomplish this end, the foreign tongue must be used as much as possible in the class room. The teacher should give all commands and carry on the ordinary conversation of the class room in the foreign tongue. Explanations of grammar and rules should be given in English;

4. Fluency and accuracy in translating easy modern French and Spanish prose;

5. To develop an interest in French and Spanish life and customs, history and literature.

Great stress must be laid on pronunciation, and every means taken to insure an accurate and intelligent mastery of the French and Spanish sounds. Unfailing vigilance and continual drill are the price of a good pronunciation. Phonetic symbols may be used at the discretion of the teacher. Every new vocabulary should be studied in class before being assigned as a lesson. A great deal of reading, individually and in concert, must be done in order to acquire fluency as well as accuracy.

For advanced work, charts of difficult sounds and words are useful. In French the ai (I), euil (I), eil sounds, eu in open and closed syllables, combinations in gn, ui, etc., are to be given extensive drill. In Spanish e and o in open and closed syllables,

the variations in r, rr, j, d and t offer special difficulty. No mispronunciation may ever be overlooked and the pupil should be taught to know the physiological basis of the sounds, so that his work may be intelligent rather than imitative.

The essentials of grammar must be thoroughly learned, but it must always be kept in mind that the grammar is a mere tool, not an end in itself. Every lesson should be the basis of a thorough drill. In the third and fourth semesters review of the first year's work is to be supplemented by advanced work limited to one lesson a week. The principles of grammar may be impressed upon the learner's mind by drawing his attention to illustrations as they appear in the text.

Reading should be begun as soon as the class is able to handle a simple text, usualy in December. The text should be read in the foreign tongue, with close attention to intonation. and should be translated with absolute accuracy and always into good English. Attention should be drawn to grammatical constructions of interest to the pupil at that point of his progress; a few idioms should be learned for practical use; and the completed lesson used as the basis for conversation. Accuracy and a thorough understanding of the foreign idiom are the aim in reading, rather than covering a great deal of ground.

It is a good plan to start with a very simple text, but to abandon it for class use when it becomes too easy. It may then be assigned for collateral reading. As the pupils progress, the text must increase in difficulty. In semesters 3 and 4, the aim is to teach the pupil accurate and fluent translation, quick sight reading, and intelligent reading of easy matter without translation.

Translation from English into the foreign tongue serves to resolve difficulties and fix correct form in mind. The exercises in the grammar are to be carefully worked over, and advanced work may be carried on by means of the sentences usually found in connection with the text. These may be done orally in class, then written at home. Original sentences embodying certain difficult points may be prepared by the teacher and given as extra board drill. Simple original compositions may be assigned on the text, on dictation work, or on such easy topics as, Notre Salle de Classe, Les Vacances, etc. (the same sort being used for Spanish).

Much drill must be given to insure a mastery of the idiomatic constructions in which French and Spanish abound. Idiomatic phrases are to be memorized and used upon every occasion until they become a part of the working vocabulary. Such constructions as the following require especial attention: nouns and adjectives with prepositions, verbs with dependent infinitives, reflexible verbs, il y a, repuis, in French, and hace and para and por in Spanish.

The aim of oral drill is the attainment of a reasonable degree of fluency and correctness in speech. Such drill must begin the very first day of school. The pupil must understand that he is expected to handle orally everything that he learns. Simple sentences may be formed with the words of his vocabulary. Dates, the days of the week, the time of day, etc., may be easily learned as well as class room phraseology. The teacher must use the foreign tongue as much as possible, always assuring herself, however, that the class really comprehends. It is unwise to exclude the mother tongue from the class room, and many a short cut may be taken by recourse to the English. Practice in oral work may be given in question and answer on the grammar exercises or text read, in memory work, or in the reproduction of a given passage, and in dramatization. The pupils always take great pleasure in asking the teacher questions and are able to understand complicated answers very easily.

The teacher must always plan the oral work so as to make it serve as a systematic drill on various grammar points, idioms, verb forms, etc.

Dictation and memory work should be begun at the very beginning of the course, and should progress from sounds and words through sentences and short paragraphs to prose passages and poems. Familiar material from grammar and reader may be used first; later proverbs, poems and prose for memorizing or instant oral reproduction may be given. By the fourth semester the class should be able to take unfamiliar matter of average difficulty.

Memory work should usually be begun in dictation, and may be learned at once. Every dictation should be written and corrected two or three times and finally written from memory.

Throughout the language course verbs must be studied, not as an end in themselves, but as a means of attaining practical command of the language. Irregular verbs should be assigned in groups of two and three, and oral and written drills and tests on both regular and irregular verbs should be frequently given. The entire time, per week, devoted to verbs should not exceed one recitation period, and the drills and tests should occur weekly.

Short tests should be given frequently; long tests almost never. Tests limited to five or ten minutes or to one topic, given every two or three days, bring good results. Grammar rules or other formal questions should never be asked, but all questions are to be planned to test the command that the pupil has of the actual spoken tongue.

FIRST YEAR FRENCH.—(First Semester)

Recommended text: The New Chardenal French Course, by Brooks—Allyn & Bacon.

1. Pronunciation.
2. Elements of Grammar:
   Chardenal's Grammar, Lessons 1-25 (or)
   Fraser and Squair's Complete French Grammar, lessons 1-18.
3. Reader:
   Meras: Le Premier Livre, lessons 1-12 or 15.
   Meras et Roth: Petits Contes de France, pages 20-25.
4. Prose composition in connection with the grammar.
5. Oral work—idiomatic constructions.
6. Tests.

FIRST YEAR FRENCH—(Second Semester)

Recommended text: Chardenal's Grammar.

1. Pronunciation and intonation.
2. Elementary grammar:
   Chardenal's Grammar, lessons 25-50 (or)
   Fraser and Squair's Complete French Grammar, lessons 20-32.
3. Reader:
   100 pages for the whole year should be the minimum amount read.
   Meras: Le Premier Livre (finish).
   Meras and Roth: Petits Contes de France (finish).
   Malot: Sans Famille.
   Daudet: La Belle Nivernaise.
   Verne: Le Tour du Monde en quatre vigts Jours.
   Talbot: Le Francais et sa Patrie.
   Montvert: La Belle France.
4. Prose composition in connection with the grammar.
5. Dictation and memory work.
6. Verb drill, irregular verbs.
7. Oral work.
8. Tests.
9. Easy texts for collateral reading.

SECOND YEAR FRENCH

Recommended text: The New Chardenal French Course by Brooks—Allyn & Bacon.

1. Review of grammar and advanced grammar:
   Finish Chardenal in first semester omitting unessential points.
   Finish Fraser & Squair's Complete Course in second semester. Review and continue study of syntax with exercises in back of book, assigning sections in the syntax for advanced study.
2. Read from 200-300 pages of easy prose.
   Dumas: Le Comte de Monte Cristo; La Tulipe Noire.
   Merimee: Colomba.
   Halevy: L'Abbe Constantin.

Maupassant: Huit Contes Choisis.
Daudet: Neuf Contes Choisis.
Labiche et Martin: Le Voyage du Monsieur Perrichon.
Hervitt: Contes Divers.

3. Dictation of poetry, short prose passages, most of which should be memorized.

4. Thorough verb drill—25 or 30 common irregular verbs.

5. Intensive study of pronunciation.

6. Conversation—stories told in class.

7. Drill on common idiomatic construction, verbs, nouns, adjectives used with prepositions, etc.

8. Tests.

9. Easy texts for collateral reading.

FIRST YEAR SPANISH—(First Semester)

Recommended text: A Spanish Grammar, by De Vitis; Allyn & Bacon.

1. Pronunciation.

2. Grammar.

De Vitis Spanish Grammar, lessons 1-13 (or)
Hills and Ford: First Spanish Course, lessons 1-23.

3. Readers: 20-30 pages to begin about December 1.

Harrison: Elementary Spanish Reader.
Walsh: Primer hobro de Lectura.
Espinosa: Elementary Spanish Reader.
Pittaro: Spanish Reader.
Hatheway and Berge-Solor: Easy Spanish Reader.
Allen and Castillo: Spanish Life.

4. Oral work.

5. Idiomatic constructions.

6. Memorizing of idioms and proverbs.

7. Prose translation.

8. Verb drill.

9. Tests.

FIRST YEAR SPANISH—(Second Semester)

1. Constant drill on pronunciation.

2. Grammar:

De Vitis: Spanish Grammar, lessons 14-25 (or)
Hills and Ford: Lessons 23-38.

3. Readers:

75 pages should be the minimum number for the whole year, 25 to 50 pages being read the second semester.
Dorado: Espana Pintoresca.
Harrison: An Intermediate Spanish Reader.
Fuentes and Francois: Trip Through Latin America.

4. Dictation and easy story telling.

5. Memory work.

6. Memorizing of idiom sand proverbs.
7. Prose translation.
8. Verb drill.
9. Tests.

SECOND YEAR SPANISH

1. Review of pronunciation.
2. Grammar: Review and advanced.

   De Vitis: Lessons 26-50 (or)
   Hills and Ford: Review and take lessons 38-50.
3. Reading: 150-200 pages of easy Spanish.

   Dorade: Espana Pintoresca.
   Valera: El Pajaro Verde.
   Moratin: El Si de las Ninas.
   Carrion: Zaragueta.
   Valdes: Lo Hermana San Sulpicio.
4. Dictation of easy prose passages, preferably on material already studied, anecdotes, poetry.
5. Memory work, story telling.
6. Verb drill.
7. Conversation and study of idiomatic constructions.
8. Easy texts for collateral reading.

LATIN

The aims of Latin teaching are set forth in a bulletin of the United States Bureau of Education, 1913, as follows:

To enrich the English vocabulary, both by the addition of new words and particularly by a more perfect mastery and clear understanding of many of the words already in use; to develop an appreciation of word, phrase, and clause relations; to teach clearness and accuracy of expression, both oral and written; to develop habits of industry and application; to make the pupil an intelligent critic of his own oral and written speech and that of others; to lay a good foundation for the study of English and of modern languages; to read some of the great Latin masterpieces; to give a wider view of life through familiarity with a great civilization remote from the present, both in time and place, in the cool, calm air of non-contemporaneous events.

Latin is a subject which is under the fire of the critics at the present time. Some educators advocate striking it from the crowded high school curriculum on the ground that other subjects less remote from life and the present are of more benefit to the student. Others are willing to permit students to study the language for two years but are unwilling to provide a place in the high school course of study for four years of work. The subject is, without doubt, beneficial to some students. The question of its value in comparison with other studies is the occasion for the controversy.

There is no doubt but that Latin, as well as foreign languages generally, are the beneficiaries of the force of tradition and habit and that relatively their values, except for a select few, are not as great, as other studies that might be pursued. The department is opposed to making the study of Latin compulsory. It, further, favors a two-year course only, especially for small high schools such as are found in Alaska. However, a four-year course is outlined for the benefit of larger schools which may desire to use the same.

In the past few years methods of teaching Latin have undergone slight changes. The direct method in which the actual language is used to a greater or less degree, is used by many teachers. Vitalizing the subject by the use of pictures, art works, magazines, etc. is recommended. Miss Frances Sabin, Oak Park, Illinois, has prepared a "Latin Exhibit" ($5.00) which includes some sixty charts. Benj. H. Sanborn and Company publish a pamphlet by Albert S. Perkins on the "Dorchester Experiment in Vocational Latin," which will be valuable to teachers.

GRADE IX.

Recommended text: "Latin Lessons" by Smith—Allyn and Bacon.

The text should be completed during the year in so far as its essential features are concerned. An actual working vocabulary of at least 400 words should be acquired by the pupil. A great deal of drill and frequent oral and written reviews are required to secure mastery of the declension of nouns, pronouns and adjectives; of the various forms of verbs, both regular and irregular; of the comparison of adjectives and adverbs; etc. The use of easy conversational sentences increases interest in the subject. There should be a constant study of word-foundation and of English words derived from Latin.

GRADE X.

Recommended text: "Caesar's Commentaries" by Kelsey—Allyn and Bacon.

Four books of Caesar's Gallic War should be used. The utmost effort should be put forth by the teacher to secure a living background in the history of the period, the Roman military system, the geography of Gaul, the topography of battlefields, etc.

Grammatical construction should be emphasized. No word or expression should be gone over without having its relation to the context made clear. Good idiomatic English must be required.

One period a week on the average should be given to Latin composition. Correction of papers in class by the pupil himself is of greater value than their correction by the teacher and return

to the pupil for inspection. D'Ooge's "Latin Composition for Secondary Schools," (Ginn) is a good text for use in Latin composition work.

GRADE XI.

Recommended text: "Orations of Cicero" by D'Ooge—Benj. H. Sanborn & Co.

Read Cicero's four orations against Cataline, the one for the poet Archias; and at least one more, preferably the one for the Manilian Law.

Latin prose composition as outlined for Grade X is to be continued throughout the year.

GRADE XII.

Recommended text: "Vergil's Aeneid" by Knapp—Scott, Foresman & Co. "Latin Grammar" by Bennett—Allyn & Bacon.

Read the first six books of the Aeneid. The beauty of the Latin Classic poetry, the study of the life of the times, and the interest that can be aroused in archaeology and mythology will add much to the interest of the pupil who pursues the study of Latin to this point.

MATHEMATICS

The force of tradition has dictated the content of the high school course of study in mathematics for many years. However, the development of the junior high school movement with its opportunity for reorganization of the work of the seventh and eighth grades bids fair to change to some extent the traditional content of the ninth and tenth grades, at least. The National Committee on Mathematical Requirements has issued a report on the "Reorganization of Mathematics in Secondary Education," Bulletin 1921, No. 32, of the U. S. Bureau of Education. This Bulletin should be in the hands of each mathematics teacher. It presents lists of materials which should make up the content of mathematics in grades 7 to 12 inclusive, together with suggestions on the treatment of the subject matter of Algebra, Plane Geometry and Solid Geometry which make it of especial value.

Mathematics is of practical, cultural, and disciplinary value to the student. Considered as a practical subject, a knowledge of high school mathematics is indispensable to the study of nearly all the sciences and to the pursuit of many arts and occupations. It is the basis of all practical mechanical operations and engineering, and of business computation and accounting. The study of high school mathematics can also be justified on cultural grounds. Some knowledge of its principles and process and some appreciation of the orderliness, harmony and beauty of its relationships are the common treasure of all cultivated peoples. Finally, the

study of mathematics develops certain desirable habits and aptitudes, such as: "A seeking for relations and their precise expression; an attitude of inquiry; a desire to understand, to get to the bottom of a situation; concentration and persistence; a love for precision, accuracy, thoroughness, and clearness, and a distaste for vagueness and incompleteness; a desire for orderly and logical organization as an aid to understanding and memory."

As expressed in the committee report referred to above, "the primary purposes of the teaching of mathematics should be to develop those powers of understanding and of analyzing relations of quantity and of space which are necessary to an insight into and control over our environment and to an appreciation of the progress of civilization in its various aspects, and to develop those habits of thought and of action which will make these powers effective in the life of the individual."

ELEMENTARY ALGEBRA

Recommended text: "Elementary Algebra" by Slaught and Lennes—Allyn & Bacon.

Complete the text. The course is one year in length and covers the following:

1. Equations and problems.
2. The four fundamental operations.
3. Factoring and solution of equations by factoring.
4. Highest common factor, and least common multiple.
5. The four fundamental operations in algebraic fractions.
6. Equations involving fractions, and clearing of fractions.
7. Ratio and proportion.
8. Literal equations and their uses.
9. Simultaneous equations of the first degree.
10. Square roots and radicals.
11. Graphs.
12. Quadratic equations.

ADVANCED ALGEBRA

Recommended text: "Intermediate Algebra" by Slaught and Lennes—Allyn & Bacon.

This subject usually follows a year of Plane Geometry and precedes Solid Geometry. The course is one semester in length and covers the following:

1. Review of the four fundamental operations, but from a comprehensive viewpoint.
2. Factoring.
3. Fractions, including complex fractions.
4. Equations of the first degree in one or more unknowns.
5. Solving equations by determinants and by graphs.
6. Ratio, proportion, and variation.
7. Powers and roots.
8. Exponents and radicals.
9. Quadratic equations, including graphs of quadratics.

10. Progressions—Arithmetic and Geometric.
11. The binomial theorem.
12. Logarithms.

PLANE GEOMETRY

Recommended text: "Plane Geometry" by Wells and Hart—D. C. Heath & Co.

Complete the text with such omissions as seem necessary in order to cover the work in one year. The subject usually is offered in the tenth grade.

The aims of plane geometry may be said to be, "(1) to give the pupil a practical knowledge of the form and measurement of lines and plane figures; (2) to teach him to see and develop further by processes of construction and deductive reasoning the relations which exist between such lines and plane figures; and (3) to develop habits of neatness, order and honest thinking."

The work should consist of the formal proofs of theorems and the solution of original exercises in approximately equal amounts. The latter is of great importance in the mastery of the subject. Knowledge of a given set of propositions, while commendable enough in itself, is not the real test of ability in geometry. Ability to apply the principles learned to the solution of new problems demonstrates the pupil's mastery of the subject.

SOLID GEOMETRY

Recommended text: "Solid Geometry" by Wells and Hart—D. C. Heath and Co.

Complete the text with such omissions as seem necessary in order to cover the work in one semester. The course in solid geometry usually follows that in advanced algebra.

Many pupils have difficulty in seeing three — dimensional space relations. Their comprehension of the drawing of a geometric solid will be greatly aided by the use of a simple model made of sticks, string, wire, cardboard, etc. It is a waste of effort from the standpoint of geometry to spend too much time in the construction of elaborate geometric drawings. Long continued use of models will interfere with the development of space imagination which is one of the valuable results of the study of geometry.

TRIGONOMETRY

Trigonometry is an interesting and practical subject. It constitutes the best possible review of the essential principles and processes of arithmetic, algebra and geometry. It is fundamental in the study of surveying, engineering, navigation, astronomy and all the higher branches of mathematics.

Larger high schools may desire to offer the subject in the senior year during one semester.

The following is the list of subjects that will be included in any standard book on plane trigonometry:

1. Trigonometric functions of an acute angle.
2. Solution of right angles by means of natural functions.
3. Theory and use of logarithms.
4. Solution of right angles with logarithms.
5. Trigonometric functions of any angle.
6. Trigonometric functions of two angles.
7. Trigonometric identities and equations.
8. Solution of oblique triangles.
9. Construction of trigonometric graphs.

NATURAL SCIENCES

The science courses recommended for the larger schools during the various years are as follows:

First year—General Science; or Physical Geography for one semester and Commercial Geography for the other.

Second year—Biology; Third year—Physics; Fourth year—Chemistry.

High schools which have a faculty of four teachers or less should not attempt to offer more than three years of science. It is recommended that Chemistry be dropped from the list. Such schools should make Biology a third year subject and Physics a fourth year subject. The number of science classes conducted in any one year may be reduced to two by alternating the work in Biology and Physics and by offering one subject in even-numbered years to both third and fourth year students, and the other in odd-numbered years.

LABORATORY WORK

The laboratory period is an important phase of instruction in science. This does not preclude the practice of demonstrations before the class by the instruction, which in many cases is more valuable than student laboratory work.

Laboratory work should be closely correlated with the work of the text. In most sciences double laboratory periods are required twice weekly. This does not mean that the arrangement must be followed absolutely. There may be occasions when laboratory work should be continued for several days in succession in which event short experiments or class demonstrations may be performed during the single period, if giving a double period to the work interferes with the schedule of students.

There is always the danger that the experiments to be performed in the laboratory may not appeal to the pupil as presenting a real problem. This should be the aim at all times. The mere manipulation of apparatus for the sake of its manipulation is insufficient. Where a principle is worked out in the laboratory before being discussed in class the interest of students is usually keener.

The following excerpt from the report of the Committee on Reorganization of Science in Secondary Schools, U. S. Bureau of Education, 1920, No. 26, contains many helpful suggestions:

The fact that laboratory work in general has not accomplished the results expected indicates the need for reorganization of the method and content of laboratory work. A few common causes of disappointment are:

(1) Experiments are too frequently devised to check up and prove generalizations or laws the truth of which the pupil already perceives.

(2) Experiments often repeat work described in the text in such a way that the outcome is uninteresting and of little value.

(3) The data collected in many experiments are an end in themselves. There is no further use for them, and hence they have no significance for the pupil. Such "busy work" serves no worthy purpose.

(4) Many experiments are too minutely quantitative and call for refinements beyond the need or appreciation of secondary school pupils.

Too frequently the laboratory and classroom, sometimes improperly called "lecture room," are separate not only physically but intellectually.

The laboratory should be a place where the pupil puts questions to nature, observes accurately, and deduces conclusions logically, not a place where directions are followed blindly and meaningless results obtained. The value of individual laboratory work has been seriously injured by requiring each pupil to do exactly the same experiment as every other pupil and do it in as nearly the same time and same way as possible. The spirit of the project method should vitalize the experimental work. There will always be some pupils who should modify the work to meet their special needs or interests. Such differentiation should be encouraged and lists of alternative work should be available to utilize individual interests and inclinations.

Improvement of laboratory practice will result in less cumbersome forms of note taking and of notebook making. The experiment is not designed for the sake of a notebook record. A summary of results which can be used in interpreting the work done should be made and pupils should be allowed much freedom in the precise manner in which the record is made. They should record important and significant facts, and the record should be clear and complete. That is, the laboratory is a "work place," and records should be simple and direct accounts of the real and vital work that has been done.

THE RECITATION

The following excerpt from the same report sets forth briefly the best thought on classroom procedure in science:

The adoption of the problem-project-topic method of science teaching will lead to a considerable change in the purpose and use of the recitation period. The "hearing of lessons," memoriter repetition of facts and principles gleaned from the textbook, the more or less discontinuous dialogues between teacher and individual pupil should give place to a real class discussion in which all take an active part in contributing, organizing, and using the information dealt with. In such discussions the teacher serves to direct, stimu-

late, and advise. There should be a maximum opportunity for self-expression in the immediate problem.

In the recitation period the skillful teacher will develop and arouse interest, furnish the necessary background, and direct the class in its search for answers to a vital problem. In the development of such work the demonstration experiment plays an important part. Such experiments need not be spectacular and sensational, but the unexpected may well be utilized to arouse interest and raise questions that the teacher wants raised as fundamental to the initiation of a class problem. In the overemphasis on individual laboratory work, the value of demonstration experiments has been minimized. Such demonstrations, besides being interest-provoking, have many of the merits of individual efforts without the confusion due to poor manipulation or the failure to observe the most important aspects of the experiment. These may serve the class as examples of the proper way of working, of manipulating apparatus, of noting results, and of drawing inferences. Pupils should be encouraged to assist in performing demonstration experiments.

GENERAL SCIENCE

Recommended text: "Elements of General Science" (Revised) by Caldwell and Eikenberry—Ginn and Company. Laboratory Manual accompanying the same.

This course should provide a basis for the development of interest in the special sciences. Care should be taken to impress upon the student the fact that the curtain is lifted but a little way in the broad field of science and that the subject is no substitute for an intensive study of biology, physics, chemistry, geology and the other sciences. The course is designed primarily for the benefit of those who may be unable to study science for more than one year.

If properly presented the work of the year should result in an awakening on the part of the student to a realization of the fact that he is living in an environment that is teeming with laws and phenomena from an understanding of which he will derive practical and cultural benefit. It should lead him into the scientific spirit of investigation.

In general science there will be little laboratory work done by the pupil. He will observe the work done before the class by the teacher, who should be exceptionally resourceful since there must be an ingenious presentation of topics selected from a very wide range of possible subjects.

If desired the course in General Science may be one semester in length, followed by civic biology or physical geography in the second semester. Recommended texts in these subjects are, "Civic Biology" by Hunter,—American Book Company, and "High School Geography" by Whitbeck,—Macmillan Company. The last named text devotes some attention to commercial geography in addition to the treatment of physical geography.

In case the course in general science is limited to one semester it will be necessary to eliminate some part of the subject matter. That portion of the text which covers material presented in the subject selected for the second semester may be eliminated without any loss to the student.

Apparatus

No additional apparatus or other equipment is required for general science in a school which offers physics or chemistry. The following are examples of the simple materials needed. Most households are supplied with articles that can be adapted to the needs of the class:

Hand lens, iron stand with rings and clamps, copper wire, zinc and copper plates for simple cell, dry cells, hydrochloric, sulphuric or nitric acid, mercury, glass tubing, magnets, beakers, test tubes, flasks, alcohol lamps, meter stick, spring balances, platform balance, pulleys, levers, thermometer, mirror, prism, graduates, hydrometer, barometer, microscope, etc.

HIGH SCHOOL GEOGRAPHY

Recommended text: "High School Geography" by Whitbeck—Macmillan Company.

The course is primarily devoted to a study of physical geography. However, some attention is given to commercial geography especially in the matter of the effect which the physical characteristics of a country have upon its commerce and industries. Standard reference books on physical and commercial geography will be of great assistance to the teacher in expanding the scope of the work outlined in the text.

BIOLOGY

Recommended text: "Essentials of Biology" by Hunter—American Book Company. "Civic Biology" by the same author and publishers as a supplementary text. Laboratory manual accompanying the text.

Biological science is intensely practical and contributes much toward a realization of the aims of the high school as set forth in the opening pages of this manual. There is much in the study of plant and animal life including man that will contribute to health, worthy home membership, vocation, citizenship, worthy use of leisure and ethical character.

Strong emphasis is to be placed on the practical application of the subject, particularly to community problems. The idea is to lead the students in a united effort to prevent losses in the destruction of natural resources, in unfruitful labor and in damage to property. Civic and social betterment are expected as a result of this study.

Observations, projects, experiments, excursions, individual reports, textbook assignment, quizzes, and conferences all offer a rich and varied choice of methods to be employed. Biology lends itself readily to the topic-project-problem method of teaching.

Apparatus

The following apparatus will be needed in a laboratory course in biology. The list is sufficient for a class of six pupils:

2 compound microscopes, at least one of which has a substage condenser and an oil immersion lens; 2 gross of thin white slides; 2 oz. each of round and square cover glasses; 6 fine forceps; 6 scalpels; 1 razor; 6 folding lenses; 12 Economy half gallon fruit jars; 12 quart, same; 12 pint, same; 50 shell straight side vials 50 by 12 min.; 3 pounds ¼ inch glass tubing; 12 feet rubber hose to match; 2 quarts formalin; 5 gallons alcohol (denatured); 2 granite pans; 6 dropping bottles; 3 large battery jars; chemical thermometers; flower pots; 6 flasks; 2 funnels; 1 graduate; 2 pipettes; 3 dozen test tubes; 6 thistle tubes; cork borer; glass cutter; 6 watch glasses; 6 tumblers; balances; a plant press; miscellaneous acids, bases, stains, and other material.

Dealers in apparatus and supplies for Botany are:

Cambridge Botanical Supply Co., Cambridge, Mass.
Bausch and Lomb, San Francisco.
Braun, Knecht, Heimann Co., San Francisco.
Spencer Lens Co., Buffalo.
W. M. Welch Mfg. Co., Chicago.

Dealers in preserved materials and slides are:

Cambridge Botanical Supply Co.
Marine Biological Laboratory, Woods Hole, Mass.
Chicago Biological Supply House, 5505 Kimbark Ave., Chicago.
St. Louis Biological Laboratory, St. Louis.

PHYSICS

Recommended text: "Practical Physics" (Revised) by Black and Davis—Macmillan Company. "Laboratory Manual in Physics" by Black—Macmillan Company.

A few of the aims of the physics course are—development of ability to observe accurately significant facts and phenomena, and at the same time, to eliminate nonessential details; developing a methodical plan of attack before beginning an experiment or set of observations; maintaining system, neatness and order in the manipulation of tools and apparatus; developing, as far as possible, scientific insight and powers of interpretation; securing the cultural value of physics by developing tastes and appreciation for scientific pursuits, either as vocations or avocations.

The teacher in every community should make a careful survey of local conditions, occupations, needs and desires of the

students and of the community in which he works in order to apply physics teaching in a practical way. Every available physical device in the home, local stores, shops, water-works, power-plants, school heating and ventilating, newspaper printing presses, cold storage plants, telephone exchange, etc., should be studied and investigated at first hand in this work.

The following list of topics was prepared by a committee of physics teachers of the North Central Association of Colleges and Secondary schools and approved by the National Commission on the teaching of Physics. It contains the topics which all teachers agree are desirable for a first course in physics. A pupil who has learned these topics well has done a good year's work in physics. It is possible, however, to increase the number of topics without leading to superficial work:

1. Weight, center of gravity.
2. Density.
3. Parallelogram of forces.
4. Atmospheric pressure; barometer.
5. Boyle's law.
6. Pressure due to gravity in liquids with a free surface; varying depth, density, and shape of vessel.
7. Buoyancy, Archimedes' principle.
8. Pascal's law; hydraulic press.
9. Work as force times distance, and its measurement in foot-pounds and gram-centimeters.
10. Energy measured by work.
11. Law of machines; work obtained not greater than work put in; efficiency.
12. Inclined plane.
13. Pulleys, wheel and axle.
14. Measurement of moments by the product of force times arm; levers.
15. Thermometers; Fahrenheit and centigrade scales.
16. Heat quantity and its measurement in gram calories.
17. Specific heat.
18. Evaporation; heat of vaporization of water.
19. Dew point; clouds and rain.
20. Fusion and solidification; heat of fusion.
21. Heat transference by conduction and convection.
22. Heat transference by radiation.
23. Qualitative description of the transfer of energy by waves.
24. Wave length and period of waves.
25. Sound originates at a vibrating body and is transmitted by waves in air.
26. Pitch and period of sound.
27. Relation between the wave length of a tone and the length of a string or organ pipe.
28. Resonance.
29. Beats.
30. Rectilinear propagation of light; pin-hole camera.
31. Reflection and its laws; image in a plane mirror.
32. Refraction, and its use in lenses; the eye, the camera
33. Prisms and dispersion.
34. Velocity of light.
35. Magnetic attractions and repulsions.

36. Field of force about a magnet.
37. The earth a magnet; compass.
38. Electricity by friction.
39. Conductors and insulators.
40. Simple galvanic cell.
41. Electrolysis; definition of the ampere.
42. Heating effects; resistance; definition of the ohm.
43. Ohm's law; definition of the volt.
44. Magnetic field about a current; electromagnets.
45. Electromagnetic induction.
46. Simple alternating-current dynamo of one loop.
47. Electromagnetic induction by breaking a circuit; primary and secondary.
48. Conservation of energy.

At least thirty to thirty-five laboratory experiments from the list of fifty contained in Black's "Laboratory Manual" should be worked out during the year.

Physics Apparatus

The following list of physical apparatus represents a minimum equipment for an accredited high school and is sufficient for a class of 10 pupils. Schools which find it possible should have a larger amount of apparatus than is set forth here. Certain articles listed may be made by the instructor and pupils:

1	Micrometer caliper	$ 6.00
1	Vernier caliper (inside, outside)	4.00
5	Meter sticks	
1	Protractor	
1	Specific gravity balance	5.00
1	Laboratory balance	$10.00 to 30.00
1	Balance (Harvard trip)	6.75
1	Balance (Jolly's, double pan)	5.50
1	Spring balance, 30 lb.	
4	Spring balances, 2000 g.	
1	Set universal weights with hooks, 10 g. to 1 kg.	
1	Set Metric weights in block, 1 mg. to 200 g.	7.00
1	Set avoirdupois weights with hooks 1 oz. to 2 lbs.	
1	Iron tripod	
1	Wheel and axle	4.75
1	Demonstration balance, with five lever clamps	
1	Set of pulleys—single, double and triple (movable and fixed)	
1	Hall's car (for incline plane)	
1	Adhesion disk	
1	Cohesion disk	
1	Surface tension apparatus	
5	Lead balls (drilled for suspension)	
5	Hardwood balls (drilled for suspension)	
1	Bursting bottle apparatus	
5	Extra bottles for same	
1	Set capillary tubes	
1	Pressure apparatus (Pascal's law)	
1	Liquid pressure gauge	
5	J tubes (Boyle's law)	
2	U tubes	
2	Thistle tubes	

1	Archimedes principle apparatus	
1	Force pump (glass)	2.50
1	Lift pump (glass)	2.50
2	Specific gravity bottles	
2	Barometer tubes	
1	Aneroid barometer	10.00
1	Hydrometer	
1	Air pump	$5.00 to 25.00
1	Madgeburg hemispheres	3.50
1	Centigrade Thermometer (10 to 250 degrees)	
5	Centigrade Thermometers (0 to 100 degrees)	
1	Pulse glass	
1	Ball and ring apparatus	
1	Compound bar	
1	Conductometer	
1	Thermos bottle	
1	Radiometer	7.50
1	Steam engine (model)	5.00
1	Gas engine (model)	10.00
5	Bar magnets in boxes	
1	Horseshoe magnet	
1	Lodestone	
1	Magnetic needle	
1	Electro-magnet	2.00
1	lb. fine iron filings	
1	Compass	
1	Electroscope	2.00
1	Leyden jar with discharger	3.00
1	Electrophorus	
1	Glass rod	
1	Ebonite rod	
1	Catsfur	
1	Piece of silk	
1	Electric pendulum	
1	Demonstration battery with elements	3.50
1	Gravity battery (crowfoot type)	
2	Dry cells	
1	Daniel cell, complete with chemicals and electrodes	3.50
1	Le Clanche cell, complete	
1	Small storage battery with glass jar	2.50
1	Hoffman apparatus (electrolysis of water)	10.00
1	Induction coil	$7.00 to 30.00
1	Telegraph key	2.00
1	Telegraph sounder	2.50
1	Relay	3.50
1	Tangent galvanometer	5.00
1	D. C. Ammeter (0 to 30 amperes)	15.00
1	D. C. Voltmeter (0 to 150 volts)	15.00
1	Resistance box	7.50
1	Lamp rheostat	15.00
1	Wheatstone bridge	5.00
1	Resistance coil (1000 ohms)	2.50
1	Resistance coil (100 ohms)	1.50
1	Resistance coil (10 ohms)	1.00
1	Commutator	2.00
1	Primary and secondary coil	3.50
1	Electric bell	
1	Push button	
1	Tuning fork (C 256 vibrations)	

1	Tuning fork (G 384 vibrations)	
1	Resonant tube	5.00
1	Rotator	6.75
1	Sonometer	10.00
1	Combined acoustic and color disc	
1	Equilateral prism	
1	Set of lenses	
1	Concave mirror	
1	Convex mirror	
2	Small plane mirrors	
1	Bunsen photometer	9.00
1	Iceland spar	
5	250 c. c. flasks	
5	150 c. c. beakers	
1	Linear expansion apparatus	8.00
5	Alcohol lamps	
1	Calorimeter	3.00
1	Hypsometer	3.00
1	Overflow can	
1	Bell jar, 1 gallon	2.00
1	Hand and bladder glass	2.00
2	Hydrometer jars	
1	Battery jar (8 in. deep)	
1	Static machine (Wimhurst or Toepler-Holtz)	25.00

Assorted rubber tubing, glass tubing, wire, corks, mercury, aluminum leaf, shot, etc.

It is not possible to give an accurate price list for the foregoing, due to the lack of stability of prices at the present time. Approximate prices of some of the most expensive articles are given. Schools should secure recent catalogues and make selections in accord with their budget. More expensive articles need not be purchased at once but should be added to the equipment of the school as soon as possible after the course in physics is begun.

Physical and chemical apparatus may be obtained from the following firms:

Central Scientific Company, Chicago.
Braun, Knecht, Heiman, San Francisco.
W. M. Welch Scientific Co., Chicago.
L. E. Knott Apparatus Co., Boston.
Schaar and Co., Chicago.
Denver Fire Clay Co., Salt Lake City.
Stewart and Holmes Drug Co., Seattle.

Schaar and Company handle an electric heater which will take the place of a Bunsen burner in schools which are supplied with electricity.

CHEMISTRY

Recommended text: "First Course in Chemistry," by McPherson and Henderson—Ginn & Company. Laboratory Manual accompanying the same.

Unless it is possible for a school to provide a well equipped laboratory with opportunity for individual work by students, chemistry should not be a part of the course of study. The sub-

ject, however, is of an intensely practical nature. Johnston in his book on "High School Education" justifies the addition of chemistry to the high school curriculum as follows:

Chemistry has a place in the high school curriculum because: First, it teaches of the constitution and changes in the world about us, and the information adds a new interest to and appreciation of life. Second, the advance in chemical knowledge is felt in a hundred ways in every home life today. Third, chemistry gives much specific information of use in everyday life. Fourth, chemistry, if properly taught, is one of the best subjects to train the pupil to see for himself, think for himself and to do for himself.

The chemistry of every-day life should be stressed in presenting the subject. The following texts are valuable for supplementary use: "Chemistry of Common Things" by Brownlee and others —Allyn & Bacon; "Practical Chemistry" by Black and Conant— Macmillan Company; "Everyday Chemistry," by Vivian—American Book Company.

In the teaching of so-called practical chemistry, however, care should be taken that the essential scientific aspects of the subject are not over-looked. This is especially important in the case of students who expect to pursue college courses wihch have for a foundation a knowledge of chemistry. Following are some essentials which will be of special value to such students.

1. Emphasis on the combining of weights by volume and ratio.
2. Formulae, graphic and balanced equations, and valence.
3. Comprehension early in the course of Charles' and Boyle's laws of gases.
4. Ionization, the important feature of modern chemical theory.
5. The functions of the gram molecular volume.
6. Hydrolysis.

Chemical Apparatus

High schools with a well equipped physical laboratory will find some of the apparatus usable in the chemistry course. However, a fairly complete list of the equipment needed is presented here. The list is ample for a class of ten pupils.

2 Pieces apparatus, electrolytic.
1 Apparatus, electrolytic, carbon electrodes.
2 Doz. sheets asbestos, thin (baking-sheet).
10 Squares asbestos, 6 by 6 inches.
1 Blast lamp, gasoline.
1 Balance, platform, with weights for weighing from 1000 grams to 0.1 gram.
2 Balances, horn pan, 7 1-2 in. beam, with weights for weighing from 100 grams to 10.01 grams.
1 Barometer.
5 Blow pipes, 8 in.
10 Brushes, test tube.
10 Brushes, small tube.

5 Burners, alcohol.
2 Capsules, brass, with wire holder and brass ramrod, for holding sodium below water.
10 Cells, dry battery.
10 Clamps, iron, small; for test tubes, burettes, etc.
5 Clamps, iron, large; for Liebig condensers.
1 Gross corks, assorted sizes, long.
1 Set cork borers, 6 in set.
5 Crucibles, porcelain, with lids, No. 00.
10 Cups, agate ware, 1 pint (or stew pans).
10 Dishes, porcelain, evaporating, No. 0.
10 Dishes, porcelain, evaporating, No. 1.
10 Droppers, medicine.
5 Files, triangular, 5-in.
5 Pairs forceps, iron, 4-in.
10 Squares gauze, iron wire with asbestos center, 5 in. by 5 in.
1 Glass cutter.
10 Holders, test tube.
2 Magnifiers, Coddington lens, or other make.
2 Mortars, with pestle, 3½ in.
5 Pans, enamel, shallow, 1 quart.
5 Pans, iron, 5 in., shallow form, "sand bath."
10 Packages paper, filter, 4 in.
2 Sheets paper, black, glazed.
12 Books Litmus.
5 Pinch-cocks, Mohr's medium.
10 Ft. platinum wire, No. 25.
10 Racks, test tube.
2 Shears, 6 in.
5 Sheets sand paper, No. 1.
5 Spatulas, horn, 6 in.
5 Spoons, deflagration, diameter of bowl 1 cm.
5 Stands, iron, ring, three rings.
2 Pounds stoppers, rubber, assorted sizes, Nos. 0 to 5, one and two hole.
1 Package tapers, wax.
3 Thermometers, chemical, 0 to 250 degrees C.
5 Tripods, iron, for supporting dishes over burner, ring 4 in. in diameter.
5 Triangles, pipestem, size to support No. 00 porcelain crucible.
2 Troughs, pneumatic.
50 Feet tubing, rubber, inside diameter 3-16 in.
20 Feet tubing, rubber, inside diameter 3-8 in.
5 Yard sticks.
24 Beakers, 100 cc.
36 Beakers, 150 cc.
36 Beakers, 250 cc.
12 Beakers, 500 cc.
50 Bottles, reagent, 4 oz.
20 Bottles, wide mouth, 4 oz.
30 Bottles, wide mouth, 6 oz., with two-hole rubber stoppers to fit.
5 Bottles, wide mouth, 8 oz., with two-hole rubber stoppers to fit.
2 Bottles, wide mouth, 16 oz., with two-hole rubber stoppers to fit.
5 Burettes, 50 cc. graduated to 1/10 cc. complete.
2 Condensers, Liebig, 15 in.
10 Flasks, distilling, 250 cc.
10 Flasks, Florence, 50 cc.

10 Flasks, Florence, 100 cc., with one and two hole rubber stoppers to fit.
10 Flasks, Florence, 20 cc., with two-hole rubber stoppers to fit.
10 Flasks, Erlenmeyer, 50 cc.
10 Flasks, Erlenmeyer, 250 cc., with two-hole rubber stoppers to fit.
5 Funnels, accurate 60 degree, 2½ in.
5 Graduates, 50 cc., graduation marks to 1 cc.
1 Graduate, 1000 cc., graduation marks to 10 cc.
5 Jars, battery, about 4 in. by 5 in.
5 Jars, hydrometer, 12 in. by 2 in.
5 Pipettes, 10 cc.
20 Plates, glass, 2½ in. by 2½ in.
5 Plates, glass, 4 in. by 4 in.
20 Plates, cobalt glass, for flame tests, 3 in. by 2 in.
5 Retorts, tubulated, with ground glass stopper, 4 oz.
5 Tubes, gas measuring, 50 cc., graduated to 1/10 cc.
10 Tubes, test, hard glass, for ignition, 6 in. by 5/8 in. with one-hole cork stoppers to fit.
10 Tubes, test, side arm, 6 in.
10 Dozen tubes, test, soft glass, medium walls, for heating, 6 in. by 3/4 in.
2 Dozen tubes, test, soft glass, medium walls, for heating, 4 in. by ½ in.
10 Tubes, thistle, 10 in. stem 3/16 in. in diameter.
5 Tubes, U, 6 in. with two-hole rubber stoppers to fit.
5 Tubes, U, 4 in. with one-hole rubber stoppers to fit.
2 Pounds tubing, soft glass, medium walls, for bending, outside diameter 4 mm.
10 Watch glasses, diameter 2½ in.
10 Watch glasses, Syracuse form, diameter 3 in.

Miscellaneous supplies and chemicals as required in the performance of experiments listed in the laboratory manual.

See list of firms under Physics from which laboratory supplies may be obtained.

HISTORY AND SOCIAL SCIENCES

The primary aim of history teaching as set forth in the report of the Committee on the Social Studies in Secondary Education, Bulletin, 1916 No. 28, U. S. Bureau of Education, a copy of which should be in the hands of each history teacher, is:

To develop a vivid conception of American nationality, a strong and intelligent patriotism, and a keen sense of the responsibility of every citizen for national efficiency. It is only on the basis of national solidarity, national efficiency (economic, social, political), and national patriotism that this or any nation can expect to perform its proper function in the family of nations.

One of the conscious purposes in instruction in the history of nations other than our own should be the cultivation of a sympathetic understanding of such nations and their peoples, of an intelligent appreciation of their contributions to civilization, and of a just attitude toward them.

The traditional type of history text with its emphasis on facts for their own sake is happily giving place to a treatment of the subject which emphasizes "those phases of the past which serve us best in understanding the most vital problems of the present." J. H. Robinson in his "New History" states:

The ideal history for each of us would be those facts of past human experience to which we should have recourse oftenest in our endeavors to understand ourselves and our fellows. No one account would meet the needs of all, but all would agree that much of what now passes for the elements of history meets the needs of none. No one questions the inalienable right of the historian to interest himself in any phase of the past that he chooses. It is only to be wished that a greater number of historians had greater skill in hitting upon those phases of the past which serve us best in understanding the most vital problems of the present.

To quote still further from the Committee on Social Studies:

The selection of a topic in history and the amount of time given to it should depend, not merely upon its relative proximity in time, nor yet upon its relative present importance from the adult or from a sociological point of view, but also and chiefly upon the degree to which such topic can be related to the present life interests of the pupil or can be used by him in the present processes of growth. * * *

It is not meant to suggest that chronology can be disregarded. The gradual and orderly evolution, step by step, of institutions and conditions is of the very essence of history. It would be impossible, were it thought desirable, to eliminate this element from historical study. But the principle of organization is antiquated which results in what some one has called the "what-came-next" plan of treatment, a mere succession of events: in the building of United States history on the framework of "administrations," and of English or Roman history on that of "reigns"; and in the organization of the entire history course in such a way that the pupil studies "ancient" history this year, "medieval" history next year, and "modern" history the year following—provided, indeed, that he happens to begin his history this year and continues it consecutively next year and the year following which is by no means invariably true.

The history classroom today should be a laboratory where maps, charts, pictures and models are as necessary for the work as are the test tubes and retorts in the chemistry room. A student should never be permitted to refer to a place that he cannot locate on the map. The making of maps may be made a very valuable exercise in history instruction. Outline maps such as The McKinley Series, published by McKinley Publishing Co., Philadelphia, should be used.

The sources of history material are—the text book, the library, pictures, current magazines and papers, and maps. The student should be required to keep a notebook, not of the formal type in which the teacher dictates what shall be written, but containing material of his own choosing such as notes taken upon required reading, outlines, reports, facts and inferences gained from his teacher or classmates, etc.

The course in social sciences recommended by the Department embraces the following:

Early European History to 1789, one year.

Later European History from 1789 to the present time, one year.

United States History since the seventeenth cenury, ½ year.

United States Civics, ½ year.

Economics, ½ year.

Sociology, ½ year.

The foregoing provides for four years of work. Small schools should not undertake the fourth year which is devoted to a study of economics and sociology. The civics text recommended approaches these subjects in an elementary way and thus meets to some extent the demand for attention to these phases of social science in the high school.

EARLY EUROPEAN HISTORY

Recommended text: "History of Europe: Ancient and Medieval," by Robinson and Breasted—Ginn and Company.

The work outlined in the text covers many events and a long period of time. The major part of the school year should be devoted to a study of the last 350 pages of the text, thus necessitating a rapid survey of ancient history up to the time of the middle ages.

The following are the more important topics to be covered during the year:

1. Prehistoric man.
2. Civilization in Ancient Egypt.
3. Ancient civilization in western Asia.
4. Early Mediterranean world.
5. Greek city states and their early history.
6. Greek world in age of Athenian greatness.
7. Alexander and the Hellenistic age.
8. Rome and her conquest of the Mediterranean.
9. The change from republic to empire.
10. Imperial Rome.
11. Break-up of Roman empire.
12. Christianity and Mohemmedanism.
13. German kingdoms and the papacy.
14. Age of disorder: Feudalism.
15. Empire and papacy.
16. England in the early middle ages.
17. England under the Plantagenets.
18. The crusades.
19. Medieval towns and life generally.
20. Medieval church at its height.
21. The revival of learning.
22. Charles V, his realms and schemes.
23. Luther and the Reformation in Germany.
24. The Reformation in England and Switzerland.
25. The wars of religion.
26. The Puritan revolution in England.

LATER EUROPEAN HISTORY

Recommended text: "History of Europe: Our Own Times" by Robinson and Beard—Ginn and Company.

The text covers the events of the past one-hundred fifty years. The following are the more important topics comprising the work of the year:

1. The age of Louis XIV.
2. The age of Frederick II.
3. The struggle between England and France for colonial empire.
4. The spirit of reform.
5. The French revolution.
6. The age of Napoleon.
7. Reconstruction and the Congress of Vienna.
8. Industrial, political and social revolution in England.
9. Continental Europe 1848-1871.
10. The British Empire in the nineteenth century.
11. Russia in the nineteenth century.
12. Turkey and the eastern question.
13. The conquest and partition of Africa.
14. The twentieth century and the world war.
15. The war's aftermath.

UNITED STATES HISTORY

Recommended text: "History of the United States," by Beard —Macmillan Company.

The study of United States history and civics covers one year. The department recommends that one semester be devoted to each since the practice of combining the two in a single course running through the year is unsatisfactory in that one subject is usually neglected. In most cases civics is the subject which receives too little emphasis.

Some schools may desire to devote a whole year to United States history followed by a half year of civics and a half year of either economics or sociology. Such a program is a satisfactory one.

The scope and purpose of the course in United States history is well stated in the following paragraphs:

This course should start at the beginning of our history as a nation and extend down to the immediate present, with special emphasis upon our social, educational, economic, and industrial development since the Civil War. In light of the preceding course in contemporary world history, this course should also emphasize the international bearings of our international problems.

In the first place, the primary motive for the study of American history should be the civic motive. To this end much more emphasis should be placed upon the social and industrial development of the United States since 1870. Every step of the course should be linked with the important problems of the present. The course should develop a higher degree of intelligence regarding the forces which make for the well-being of our people.

In the second place, the emphasis of both texts and teaching must be such as to support as strongly as possible the maintenance, improvement and perpetuation of American ideals and institutions. We must avoid even the possibility of teaching the minor events of history, such as battles, military campaigns, and military heroes, as comparable in importance with such great historical facts as the Declaration of Independence, the Constitutional Convention, the maintenance of the Union, Industrial Revolution and the Organization of Capital and Labor, since 1870, the World War, and so on.

In the third place, where necessary, our text-books must be re-written in the interest of presenting adequately and fairly the truth regarding all questions and issues discussed. The account of all points must be as fair, so far as it is possible with the present knowledge, to other nations involved, as to our own. The creation of unjustifiable prejudices in favor of or against England, France, Mexico, Spain, or other nations must be avoided. The story of the Civil War must be so presented as to represent truly and fairly the objects and motives as well as the successes and failures of both sides to the conflict.

UNITED STATES CIVICS

Recommended text: "Social Civics" by Munroe and Ozanne—Macmillan Company.

The object of teaching civics is to make good citizens in the broadest meaning of the term. Mere facts regarding governmental organizations are but means to an end. The teacher should strive to inculcate the moral impulse to good citizenship and to establish standards of action in all community relations which shall be high and worthy. The social motive should predominate in all phases of civics instruction.

The leading facts concerning the formation, adoption and function of the Constitution of the United States should be studied as a means of providing a suitable background for a clear understanding of American ideals. In these days of radicalism and reaction against constituted authority every high school student should be given an opportunity to understand and appreciate the significance of the fundamental law of the land. The Constitution goes deeper than expediency and the present interests of any particular class or group and sets forth fundamental individual rights which cannot be set aside. "The Short Constitution," by Wade and Russell, (American Citizenship Society Press, Grand Rapids, Michigan) and "Our Charter of Liberty" issued by The National Security League, New York, are recommended for supplementary use. The following quotation from the latter is significant:

Laws change, and must change, as society becomes more complex; but the basic principles of government are surprisingly changeless. Every great, fundamental political conception which challenges the world today, save the representative principle, was old when Plato walked in the Groves of Athens, and Socrates expounded the meaning of life in the shadow of the Acropolis. Novel-

ties in fundamental political theory are the wares of mountebanks; they are second-hand garments offered as new. Anarchy, Socialism, Ochlocracy, Syndicalism, and all the rest, were shopworn specifics for the inevitable ills of man before Caesar crossed the Rubicon, or Canute bade the swelling tides recede. Their alluring Lorelei promises were as well known to the founders of our Constitution as to us. In rejecting them and choosing representative government, these farsighted leaders laid the foundation for the great, free, prosperous nation which America has become. In drafting our Constitution, they created an instrument which sums up the best that was in the past, a form of government free from arbitrary power, open to change as progress calls for change, a statement of the basic principles upon which freedom must rest, old as the gold of Ophir, but never losing their lustre.

The recommended text in civics obviously does not present the peculiar facts relating to territorial and local government. These can be dealt with only in broad terms. The teacher must vitalize and localize. Among the methods suggested are:

The study of the organic act under which Alaska became a territory, the law creating cities, acts of the Legislature relating to the functions of city and local governments, municipal ordinances. etc. Men in public office are usually quite willing to assist in the instruction of young people in matters of government. Topics relating to the conduct of different bodies and officers can be given to pupils for investigation and report.

The assignment of reading topics that will require for their investigation the use of books, magazines and other printed matter is of great value. The pupil should not be allowed to do all his reporting on topics where the information comes, only from observation. If he gets nothing else out of a course in civics, the pupil should acquire a knowledge of the methods whereby he can secure the treasury of information that lies in books, magazines, pamphlets and other similar sources.

At present there is a tendency to minimize national phases of civics instruction in order that the study of local community relations with their apparent immediate value may be given prominence. It would be unfortunate if the local community relations should supplant a study of national community life and national civic relations. The function of the course in civics should be to train the pupil to recognize the common general interest in the midst of conflicting group interests and to cultivate the will to subordinate the latter to the former.

ECONOMICS AND SOCIOLOGY

As stated in the introduction to the course in history and social sciences only the larger schools should attempt to offer work in economics and sociology. Both courses are valuable if presented by competent teachers.

Inglis in his "Principles of Secondary Education" sets forth reasons for the study of economics in the high school as follows (the same argument would apply to sociology):

It is clear that the activities of modern industrial and social life in America call for some acquaintance with the common and fundamental principles of economics on the part of every individual. It is clear also that the average man or woman at present is lamentably ignorant of the simplest laws of economics which play such an important part in our social organization. Some provision must be made to meet the apparent need. Some of the necessary economic knowledges can be secured incidentally through the study of geography, history, civics and other subjects in the elementary and secondary schools. Incidental study of that sort is, however, insufficient. The fact must be faced that large numbers of boys and girls are constantly going forth from the school into the world of industry where they must deal with problems social and industrial which call for a working knowledge of common economic principles. The growing social and political importance of economic problems, the increasing complexity of governmental-industrial relations, the changing relations of capital and labor, of employee and employer, the development of labor organizations, emphasize the need for such instruction at the present time. Unless we are to trust to the influence of demagogues and exploiters of industry some provision must be made in the school for this imminent need.

Common practice relegates all direct instruction in economics to the college or other higher institution. Doubtless the more mature the student the more readily he may understand the principles of economics and the more comprehensive may be his grasp of that science. Hence it is commonly urged that secondary school pupils are incapable of understanding the principles of economic laws. Such an argument is for the most part based on the conception of economics as a logically organized and complete science. For the study of economics in this sense there is no place in the secondary school. However, many important principles and problems of economics are readily understood and eagerly studied by pupils of secondary school age. An important distinction should be made between a philosophic study of economics as a logically organized science and a "practical" study of certain of its principles and problems as involved in the activities of "the common man." The philosophic study of economics belongs to higher education. The "practcal" study of economic elements has a legitimate place in the program of the secondary school.

Following is a list of texts from which selections may be made:

Economics—

Burch: American Economic Life—Macmillan.
Lang: An Introduction to Economics—Gregg.
Ely and Wicker—Elementary Principles of Economics.
Marshall and Lyon: Our Economic Organization—Macmillan.
Bullock: Elementary Economics.

Sociology—

Burch and Patterson: American Social Problems—Macmillan.

Ellwood: Sociology and Modern Social Problems—American Book Company.

Leavitt and Brown: Elementary Social Science—Macmillan.

Hall: A Practical Sociology—Scribners.

Towne: Social Problems—Macmillan.

COMMERCIAL SUBJECTS

The commercial department in high schools is no longer an experiment. Commercial subjects are an essential part of the curriculum in a well-equipped, modern high school.

The course as outlined includes stenography, typewriting, bookkeeping, business arithmetic, business law, economic and commercial geography, business English, penmanship and spelling.

Students in the first and second years of high school should elect very few of the commercial subjects. A practical foundation in English, spelling. arithmetic, penmanship, elemental science and history should be a requirement from all students who desire to pursue more advanced commercial subjects. All students who undertake the commercial course should understand that four years of high school work are a minimum requirement for entrance into business life. Students who are poorly trained and immature on entering business life bring nothing but discredit upon the work of the high school, and pain and discouragement to themselves.

Local conditions will always be a factor in determining the details of a commercial course. There should be an intimate relationship between the commercial department and the business life of the community if the best results possible are to be attained. The business atmosphere which may be brought into every class room will be a vital element in the success of the work. Talks by business men who are specialists in the various lines of business endeavor will prove inspirational and helpful to students.

Smaller schools will find it impracticable to offer a complete commercial course without neglecting other subjects. Such schools may offer a Bookkeeping Course only which includes all subjects except shorthand and typewriting, or they may offer a Stenographic Course including shorthand, typewriting and as many of the other commercial subjects as possible.

COMMERCIAL ARITHMETIC

Recommended text: "Essentials of Business Arithmetic" by Van Tuyl—American Book Company.

The course is one semester in length. The work should not be confined to the use of text book material. The commercial activities of the community and territory will provide much supplementary material.

The following should be emphasized:

1. The fundamental principles of arithmetic and their application.
2. Fractions.
3. Practical measurements.
4. Percentage and its application to business in discount, commission and brokerage, interest, taxes, insurance, stocks, bonds and exchange.

COMMERCIAL GEOGRAPHY

Recommended text: "Commerce and Industry" by Smith—Henry Holt and Co.

Supplementary text: "Industrial and Commercial Geography" by Smith—Henry Holt & Co.

The course is one semester in length. The material presented in the text provides an excellent outline of subject matter. This should be supplemented by the use of additional texts, reference books, trade reports, magazine articles, maps, etc.

The aims of the course are: "To acquaint the pupil with the laws which govern commercial expansion; and to give him an understanding of industrial and trade conditions in his own state, his own country, and in the world at large."

A study of local commerce should be made. In this connection a survey of local industries will be interesting to students.

Study the commerce of Alaska: fisheries, mining, lumbering, the factors of transportation, etc.

BOOKKEEPING

Recommended text: "Twentieth Century Bookkeeping and Accounting"—Southwestern Publishing Co., Cincinnati.

The course is two years in length altho if desired the elements of the subject may be covered in one year. Bookkeeping periods should be twice the length of the formal recitation period in other subjects if full credit is to be given.

The aims of the subject are:

1. To impart a knowledge of the principles of bookkeeping and business procedure.
2. To train the student to interpret business records and their summarized results.
3. To afford practice in handling routine business transactions.

The course in bookkeeping presents excellent training in applied penmanship. Only the student's best work should be accepted. The statements in connection with each original entry should be clear and concise, thus affording training in business English.

Much time can be saved for all students by having special drills and discussions on questions, problems and entries similar to those to be encountered. Too much emphasis cannot be placed upon the importance of such class recitation and quiz work.

"Bookkeeping Exercises" by Bartholemew—Part One, elementary, and Part Two, advanced—Gregg Publishing Company—afford excellent supplementary material for special class drill. The net price of these books is 40 cents each.

The following reprint from the Nevada course of study will be of interest to teachers of commercial subjects:

Because today less than 2 per cent of the calls for office help are for bookkeepers to take charge of a set of books, where only a few years ago there was a great demand for this kind of help, a proper understanding of the place of bookkeeping in a modern commercial course should be brought clearly before the teachers and pupils of our high schools.

The young man who enters business as a bookkeeper is more likely to find himself in a "blind alley" than most educators realize. In a survey of the needs in commercial education made in one of the larger cities a majority of the large concerns canvassed stated that bookkeepers did not even need to know double-entry bookkeeping, as modern record systems are so highly sectionalized.

While bookkeeping is still the backbone of the commercial curriculum, it holds its place by virtue of the fact that it affords the best possible opportunity for giving the pupil an all-round knowledge of business and also furnishes the very best means of teaching business—why and how it is carried on, and its classification into retail, wholesale, manufacturing, etc. Incidentally it enables the teacher to develop in the pupil business habits such as punctuality, neatness, accuracy, courtesy, etc. Business customs and terminology can be taught best through the medium of this subject. The penmanship and arithmetic instruction is vitalized in bookkeeping; and not only should there be a close correlation between bookkeeping and penmanship and arithmetic, but the correlation should be established also between bookkeeping and such subjects as business English, commercial law, commercial correspondence, business organization, and business management.

It should constantly be kept in mind that "ability to keep books is a by-product of instruction in bookkeeping and as such it is important, but the real purpose behind bookkeeping instruction is the teaching of business and the development of business habits."

SHORTHAND

Recommended text: "Gregg Manual," "Gregg Speed Studies," "Graded Readings"—Gregg Publishing Co., San Francisco.

The course covers two years in length and should be taken in the third and fourth years in conjunction with typewriting. Many schools may find it advantageous to offer a one-year course. This

course should be taken by seniors, post-graduates and others, who by reason of maturity and ability are able to do the work profitably.

Shorthand may be learned by any pupil of average ability; but more than ability to take dictation is required to make a good stenographer. Maturity, judgment, tact, good vocabulary, command of good English, ability to spell, punctuate, divide words properly, and to paragraph are some of the many requisites. Too many so-called stenographers are failures because of deficiency in one or more of these requisites. Smaller offices often require workers who can combine a little stenography with other duties, but such office assistants are not properly called stenographers. Enough of this class will always be available while the demand for first-class stenographers will never be fully met.

Fifty words a minute for ten minutes should be the minimum speed attainment at the close of the first year. The principles of shorthand should be covered during the year.

In the second year the following standards should be attained: Speed should be developed to 100 words per minute on solid matter of average difficulty; ability to transcribe notes at a good rate of speed with absolute accuracy should be secured; the proper use of notebook, and other details connected with the routine of the stenographer's work should receive attention.

If inaccuracies in the use of English develop in transcript work the shorthand teacher should try to strengthen the pupil in his use of English. Use of the apostrophe, quotation marks, punctuation, paragraphing, spelling, plural forms, capitalization, and syllabication will cause the most trouble. Instruction along these lines cannot be left entirely to the English teacher. In the long run, time will be saved by attention to this drill work.

TYPEWRITING

Recommended text: "Rational Typewriting"—Gregg Publishing Company.

The course covers two years and should begin in the third year unless there is some special reason for offering the work to first or second year students. Students who graduate from the high school and who use their typing commercially should complete the work in their senior year if they are to derive the greatest benefit from it.

A knowledge of business forms, the arrangement of business papers and correspondence, and the ability to arrange letters and business forms from unarranged copy or shorthand notes is as necessary a part of the course in typewriting as is a mastery of technique and the development of a fair amount of skill in operating the typewriter.

The Victrola is an excellent device for class drills in the development of rhythm. The practice of rhythm calms the nerves,

produces continuous mental action, attracts the attention from the fear of making errors, and assists concentration.

A means of keeping the class together and at the same time permitting those who work faster and more accurately to get additional benefit is to require one perfect copy of each lesson and two copies that contain a small number of errors, marking all pupils who accomplish this minimum 75% to 80%. Those who turn in two perfect copies and one with errors may be marked 81% to 89%. Those who turn in three perfect copies may be marked 90% to 100%. By this method much of the strain is removed, and the pupil will get at least one acceptable paper completed each day and will be encouraged by the thought that he is making progress. By requiring the completion of three copies he will write the exercises through to the end at least three times. while he might write it through but once if only one perfect copy is required. This insures practice on the latter part of the lesson as well as on the first part.

Credits

Credit for one-half unit is based on one year's work, one period a day for at least 40 minutes throughout the year with a minimum test average of 25 words a minute net (ten minutes test, deducting 10 words for each error), using standard test material such as is furnished by the various typewriter companies.

Credit for an additional half unit is based on an additional period a day throughout the year, and an attainment of at least 40 words net a minute (ten minute test, deducting 10 words for each error). Pupils who take typewriting two periods a day throughout the year and attain the 40-words-a-minute test-average are entitled to one unit of credit.

The third half unit is earned by one year's work, one period a day for at least 40 minutes, and the ability to pass a 50-words-a-minute-test using the above rules. The fourth half unit is earned by working for an additional period per day and ability to pass a 60-words-a-minute-test. Pupils who take typewriting two periods a day throughout the second year and pass a 60-words-a-minute-test are entitled to one unit of credit.

COMMERCIAL LAW

Recommended text: "Commercial Law," by Gano—American Book Company.

The course is one semester in length and should be open only to third and fourth year students. The subject matter outlined in the text is sufficiently comprehensive to provide ample material for one-half year's work.

Pupils of high school age are too immature to go into a detailed study of commercial law, and the average high school teacher is not equipped to enter into an exhaustive treatment of the subject. There are, however, certain fundamental principles

which should be commonly understood, and which are within the grasp of the high school student.

It will add to the interest of students if local attorneys are requested to appear before the class and lecture on interesting phases of the various topics treated in the course.

BUSINESS ENGLISH

Recommended texts: "The Business Man's English," by Bartholemew and Hurlbut—Macmillan Company. "Business English," by Hotchkiss and Drew—American Book Company.

The course is one semester in length. Two years of regular high school English are required as a foundation for the study of business English. The course, therefore, is open only to third and fourth year high school students.

The work of the course consists of a review of English grammar, punctuation and capitalization; the study of commercial words and phrases; business letter writing; spelling; and drill in the use of general oral and written English.

The following is a reprint from the Idaho course of study which contains valuable suggestions:

If the class in correspondence is divided into two or more business firms which have dealings with each other, the interest is greatly stimulated. Conditions are thus created which call for such business activities as the following: letters soliciting stock subscriptions; the issuance of stock certificates; advertising; the description of articles for a mail-order catalog; sales-letters and circular letters; inquiries regarding prices and terms; letters quoting prices and terms; orders, acknowledgments, telegrams and telephone calls; follow-up letters; invoices, statements, and collections.

Throughout the entire semester at least one oral report per week should be required. This should be based upon business problems and situations. Explanatory talks, sales talks, telephone conversations, personal applications for positions, etc., will furnish material for exercises in oral compositions which will develop precision in the choice of words, confident manner and tone, good organization, and the ability to convey information briefly and clearly. Definite assignments should be made to individual pupils, requiring the collection of data on some subjects of interest, and the making of a report. A student might be sent to interview the proper persons to find out how money is sent by telegraph. The method of obtaining the interview and asking for the required information would form the basis of some preliminary work. Such interviews might be conducted in the class room, between the student and the teacher, or between two students. Having obtained the information, the pupil would be required to prepare his report in concise English, and to give it orally.

Much of the discussion in the business English class may be based on periodicals of general and special business interest which pupils should be encouraged to subscribe for and read. A club may be formed to aid the pursuit of a common interest and for further training in parliamentary procedure and self-expression generally.

SPELLING AND PENMANSHIP

Recommended texts: "Word Study for High Schools," by Swan —Macmillan Company, "Palmer Manual of Business Writing,"— A. N. Palmer Co., Cedar Rapids or Portland.

Penmanship and spelling, while having a direct vocational value for commercial students, should not be regarded as exclusively needed by these students. Serviceable, legible penmanship and facility and accuracy in spelling should be a part of the equipment of every high school student.

Provision has been made in the English course for formal work in spelling. A review of spelling is a part of the work in business English, also. The needs of individual classes will determine whether or not any further study of the subject is required.

Schools which prefer to omit definite work in spelling from the English course may desire to offer a year's work in spelling and penmanship to all high school students. If this is done, it is recommended that each subject be offered daily and that a regular period in the high school day's program be divided between the two subjects. If a full unit of credit is to be given for the work, outside preparation must be required. In penmanship this can be accomplished by requiring that a definite amount of drills be prepared outside of class and submitted daily.

Eighth grade graduates who have earned the full Palmer diplomas may be granted a provisioned half-unit of high school credit. The condition is that the pupil shall maintain his proficiency throughout his high school course, using a free movement and a legible hand in his daily work in all departments. Final credit is not to be given until the end of the high school course and then only to such students as maintain or better their proficiency. Teachers of penmanship should occasionally secure and examine papers submitted by such pupils in other departments. A record should be kept indicating whether or not the penmanship work of such pupils is satisfactory from year to year.

INDUSTRIAL AND HOUSEHOLD ARTS

MECHANICAL DRAWING

The course is one year in length and counts for one unit of credit if a double-period per day is devoted to the work. The majority of schools may prefer to correlate the work with manual training and offer three double-periods of mannal training and two double-periods of mechanical drawing weekly.

Mechanical drawing is a practical and interesting subject. It is the means by which an idea is transferred from the mind of one person to another through the medium of lines. A well-made drawing will very often save hours of verbal or written explana-

tion. It teaches one, first, to be accurate; second, to see things as they really are; and third, to think and express ideas so that others may see them and thereby be able to execute them.

Neat and accurate work depends largely on the quality of the instruments used. Schools which do not provide first class equipment for students should not offer the course. In some communities it may seem best to require pupils to purchase their own drawing instruments.

Equipment for a class of twelve students is as follows:

(Approximate prices are given)

12 drawing tables	
12 sets of drawing instruments	$100.00
12 T-squares (cherry)	4.00
12 triangles 45 degrees, 7 inches	6.00
12 triangles 30 degrees, 60 degrees, 7 inches	6.00
12 white pine drawing boards, 20x35 in.	18.00
12 architects mechanical or triangular squares	6.00
6 irregular curves	1.80

Drawing paper in large sheets, size 19x24 in., for mechanical drawing. Each pupil should have the following:

1 doz. thumb tacks.
1 pencil and ink eraser.
1 sponge eraser.
1 pencil, soft, finest grade No. 2.
1 pencil, 4-H, for mechanical drawing.
1 bottle Higgins' black drawing ink.

The following suggestive outline for the first year of mechanical drawing is reprinted from the course of study for the State of Kansas:

The course in first-year drawing should be based upon these principles: First, that the student can just as well, and perhaps better, be taught the use of instruments on work that will at the same time have educational value; second, that the time which is usually devoted to drawing is so limited that it should be spent entirely in acquiring knowledge of and skill in drafting rather than in the solution of numerous geometrical problems which are seldom used; third, that the place for the introduction of geometric constructions is at the point where an application of the same is necessary.

Lettering. Neat, plain and legible lettering, one of the most important requisites for a good draftsman, should be emphasized throughout the course. So far as appearance is concerned, there is no part of a drawing so important as the lettering. A good drawing may be ruined in appearance by lettering done ignorantly or carelessly.

A simple, single-stroke Gothic letter is recommended for general use. The Reinhardt letter is appropriate for notes on drawings. Ability to letter well in these styles can be acquired only by continued and careful practice. Daily practice in lettering should be given and the student's progress noted.

Lines. The alphabet of lines used in mechanical drawing should next be introduced. The conventional lines used in general

practice should be used in the drafting room. Specimens of drawings from architects' and engineers' offices should be exhibited at this time to illustrate the use of the lines. In this connection note that in most commercial offices red ink is fast going out of use and contrast in black lines substituted.

Instruments. A lecture on the use of instruments and equipment is next in order. Proper habits with regard to their use and care must be acquired at the beginning.

Sketching. The ability to sketch free hand and rapidly is of inestimable importance. In the drafting room all problems should be approached first by making a free-hand sketch of the views required. The entire plan of procedure, including the arrangement of views on the sheet, may be blocked out in the sketch form and approved before the mechanical execution of the same with instruments is made. This method gives the student's imaginative powers full rein and allows the hand to carry out the mental picture as it is being formed. Lectures by the instructor should also be accompanied by rapid sketches that the student may have constant training in reading and interpreting drawings.

Plates. Mere copying of plates as laid out by many texts in mechanical drawing leads to superficial knowledge and mechanical skill instead of promoting self-reliance and originality. After a drawing is thoroughly understood, the student's knowledge of the principles involved should be tested by requiring him to solve a similar problem or one that is a step in advance. This method leads the student to observe closely, to digest thoroughly, and to apply what he has acquired with originality.

Simple Working Drawings. A series of about ten simple working drawings may well be given at the beginning of the course. An acquaintance with the use of instruments and the alphabet of lines will be obtained as well as an insight into the practical use of drawing.

The following are suggestive objects which may be selected: rectagular frame, dovetail ways, joints (used in joinery), box, cylinder head, face plate, crank, gland, bench, shaft, box, link, angle iron, and small pulley.

Orthographic Projection. A study of orthographic projection is essential to a thorough course in mechanical drawing. After a study of the preceding simple drawings has been made the value of orthographic projection is apparent; and as a result the student grasps the theory without difficulty. Four plates will be sufficient for the presentation of this subject.

Intersection of Surfaces. A few plates covering the principles of intersection of surfaces, developments, and revolution of surfaces should be given. An effort should be made to make these problems as practical as possible.

Isometric Projection. The ability to read working drawings may well be tested by translating same into pictorial representations. Considerable stress should be placed on the value of this form of presentation and several plates should be devoted to the subject.

Detail Working Drawings. A scale drawing of the parts of a simple machine of more than one piece.

Assembly Drawing. An assembly drawing of the above machine.

Furniture Design. The working drawings of a piece of furniture, such as a chair, desk or bookcase, with bill of stock, should have its place in first-year drawing. Emphasize shop methods in connection with this study.

Blueprinting. Each student should make a tracing of the assembly drawing mentioned above and then blue print same.

Machine Drawing. For those who wish to specialize in mechanical drawing, the last few plates of the year should be taken up with a study of fasteners. By this procedure a real taste of machine drawing is given before the first year is finished.

Architectural Drawing. For those who wish to specialize in architectural drawing, after following the course in mechanical drawing to this point, a few plates on wood construction are given. This will give the student an insight into the value of architectural drawing from a practical standpoint.

MANUAL TRAINING

The course outlined is two years in length and is divided into one year of shop wood-working, one semester of carpentry and one semester of elementary electricity. One unit of credit is earned each year if a double period is devoted to the subject daily. Some schools may prefer to offer manual training for three double-periods weekly in which event but one-half unit of credit is given. Three double-periods devoted weekly to manual training and two to mechanical drawing entitle the pupil to one full unit of credit.

Lists of textbooks in manual training with descriptions of the same may be secured from the Manual Arts Press, Peoria, Illinois. The following magazines will be found helpful to teacher and students: "Industrial Education Magazine," Manual Arts Press, Peoria, Illinois; "Industrial Arts Magazine," Bruce Publishing Company, Milwaukee, Wisconsin.

SHOP WOODWORKING

The following outline is taken from the course of study for the State of Kansas. It contains much which will be helpful to manual training teachers:

A detailed series of graded lessons is selected by the teacher from the outlines given below. Each exercise is first presented in the form of a working drawing made by the pupil, a blueprint, or a blackboard sketch. The mechanical processes of construction are then explained by the teacher or illustrated before the class, as the case demands. Careful instruction in the care and grinding of each tool should precede its use by the pupil. A certain amount of preliminary work is necessary to rapid advancement.

This preliminary work is specified below in the form of tool processes. These processes should be demonstrated to the pupils before they are employed in an exercise requiring their use. Exercise in these processes may be had on waste pieces of wood, or they may be applied in the making of small articles as suggested.

1. Measuring and lining exercises.
   a. On a rough board with a two foot rule and pencil; try-square and pencil; bevel and pencil.
   b. On a smooth board with marking gauge; try-square and knife; bevel and knife.

c. On a smooth board with compass, straightedge and knife, making a protractor with 15-degree divisions.

2. Sawing exercises; preparation of stock for models.
   a. Rip and crosscut sawing to pencil lines, rough board resting horizontally on trestles.
   b. Rip sawing to gauge lines, piece held upright in vise.
   c. Use of back saw; square ends, sides of grooves; the piece resting on bench-hook or in vise.
   d. Sawing on diagonal; sawing kerfs in miter box.
   e. Curve sawing with hand-turning saw.
3. Sharpening exercises.
   a. Straight and curved edge tools on grindstone.
   b. Whetting straight and curved edge tools on flat oilstones and slips.
4. Planing exercises.
   a. Making plane surfaces; jointing edges; planing to gauge lines.
   b. Use of block plane; squaring ends held in vise.
   c. Oblique end planing.
   d. Rabbeting, beading, grooving, etc.
      Applications: sandpaper block, picture frames, drawing board.
   e. Router plane: planing surfaces below general surface of pieces.
      Applications: bottoms of dados, or grooves, dovetail joints, etc.
5. Nailing exercises.
   a. Nailing square joints, using brads, finishing nails and wire nails.
   b. Toe-nailing.
   c. Nailing miter joints.
      Application: nail box, screw box for shop equipment, picture frame, etc.
6. Boring exercises.
   a. Perpendicular boring with auger bits, across the grain, entirely through.
   b. Perpendicular boring to a given depth, both across the grain and in the direction of the grain.
   c. Boring with awls, drills, countersinks.
      Application: gauge, mortise and tenon, dovetail, oilstone, mission of turning saw, boring for ornament, boring for dowel pins in joining two pieces, boring for dowel pins for fastening rails or tables and chairs to legs, drilling and countersinking for screws, drilling with awl for brads.
7. Chiseling exercises.
   a. Sides and bottoms of grooves across and in the direction of the grain.
   b. Sides and bottoms of oblique grooves.
   c. Curved surfaces.
      Application: gauge, mortise and tenon, dovetail, oilstone box, rabbeting, drawing board, etc.
8. Gluing exercises.
   a. Rubbed joints.
   b. Clamped joints.

c. Doweled joints.
Application: picture frame, T square, drawing board, joints used in making furniture.

Brief talks on the following subjects should be given as the composition of woods, age of trees, decay of trees, season for cutting trees, lumbering and milling, warping properties of wood, measure and value of wood, preservation of wood, kinds and qualities of wood, woodworking trades. Information on above subjects may be found in "Elementary Wood Work," by Edwin Foster, published by Ginn & Co.

In the following exercises the wood best suited is named, but other material may be used if desired or if more convenient:

1. Sawing exercise.
Stock: Pine, white.
Dimensions: 7/8 in. by 2 in. by 12 in.
Tools: Rip saw, crosscut saw, back saw, try-square, gauge, marking knife, dividers, T bevel, and chisel.
Purpose of exercise: To familiarize pupil with the use of crosscut, rip, and back saw; to teach pupil to make measurements with rule, try-square and gauge, and to trisect by using dividers; to teach pupil to saw accurately to a knife line across the grain and diagonally with a back saw; and to cut to an open mortise with saw and chisel.

2. Cutting board.
Stock: White pine.
Dimensions: 9 in. by 12 in.
Tools: Rip saw, crosscut saw, back saw, try-square, jack plane, gauge, brace and bit.
Purpose: To teach the pupils to square up stock with the planes by planing smooth, flat surfaces and edges at right angles to each other; to saw ends of block square to a knife line. ⅜ in. hole drilled at one end for hanging, ¾ in. from top.

3. Book rack.
Stock: Oak.
Dimensions: Ends 6 in. by 7 in., 14 in. between ends.
Tools: Saw, gauge, jack plane, chisel and brace and bit for doweling.
Purpose: Pupils are encouraged to make a good book rack and to take it home to be of use. The exercise calls for squaring of stock, accurate fitting, making of duplicate parts, gluing, drilling holes for screws or doweling. Surfaces are finished with smoothing plane and steel scraper, and a coat of stain or varnish is applied.

4. Drawing board.
Stock: White pine.
Dimensions: ½ in. by 16 in. by 21 in.
Tools: Jack plane, jointer plane, saws, rabbet plane, chisel, marking knife, gauge, smoothing plane.
Purpose: An exercise in gluing stock. For a width of 16 inches an average of three boards is used. The edges of the boards are jointed, glue is applied, and the boards are clamped together. A ½ in. rabbet is cut at each end, leaving a tongue to fit into a corresponding groove in a ⅞ in. by 1¾ in. by 16 in. piece of pine for binding each

end. This is an exercise in tongue-and-groove joint fastened together with glue. No nails or screws are used in this exercise. The exercise is valuable to show the use of large and small clamps in gluing stock. The board is finished square and smooth and treated with a coat of varnish.

5. T square.

Stock: Walnut and maple.

Dimensions: Head, 12 in. by 2¼ in. by ⅜ in., blade, 23½ in. by 1⅞ in. by ⅛ in.

Tools: Smoothing plane, jack plane, jointer plane, rabbet plane, gauge, hand-turning saw, brace and bit, screw driver.

Purpose: A companion piece for No. 4, furnishing a set for mechanical drawing and designed to be of practical use to the pupil. Walnut blade is planed to 1⅝ in. To each edge a thin (⅛ in.) strip of maple is glued. The head is cut on curved lines with hand-turning saw. Blade is fastened at right angles to head with glue and screws.

6. Tool box.

Stock: White pine or poplar.

Dimensions: Length, 24 in.; width, 12 in.; height, 12 in.

Tools: Saw, planes, rabbet plane, chisel, gauge.

Purpose of exercise: A practical exercise in the making of rabbeted and dovetailed joints, and in the fitting of hinges. End pieces are fitted to sides by means of dovetail joints, and top and bottom are fitted into rabbets made in sides and ends. The box may be fastened together and sawed into two sections, or may be made in two sections, each six inches high, and fastened together with hinges.

7. Foot stool.

Material: Oak, maple, hard pine.

Purpose: Mortise and tenon, fastening of tops to rails with screw. Tops may be upholstered or inlaid.

8. Taboret.

Material: Oak.

Applying knowledge obtained from previous exercises. Planing legs square, laying out and cutting cross pieces, half lap joint, joining pieces for top, laying out and cutting top to size and shape, chiseling mortises and sawing tenons to fit, drilling holes and making dowels, fitting parts together, gluing, use of hot and cold glue, finishing, planing, scraping, sandpapering, staining and polishing.

9. Table.

Material: Oak.

Dowel and glue-block construction, legs joined to rails by means of dowel pins and stiffened with glued blocks; drawer construction, rabbet and blind dovetail joints, finishing.

10. Table.

Material: Oak or maple, stained.

Laying out and cutting duplicate parts, legs tapered with saw and plane, and fastened to top and shelf with dowel pins; drawer construction, finishing with stain and varnish.

If time permits any of the following may be chosen by the pupil and made from his own designs and drawings: foot stool, lamp and shade, chair, shoe box, skirt box, fireless cooker, screen, porch swing, plate rack, book rack, music cabinet; or other articles requiring an equal amount of work may be chosen.

The above problems are placed here as suggestions. It is recommended that the desire of the pupil and the needs of home and school be kept in mind in the work of the manual-training departments.

Group projects, in which several of the pupils or all may be employed on the same job, serve well the purpose of the manual-training laboratory. Such projects as making athletic apparatus (hurdles, jumping and vaulting standards, basket-ball goals and backstops), school furniture, etc., may be selected.

CARPENTRY

The best way to study carpentry is by class work in constructing buildings, such as houses, garages, etc. Where this is not possible small buildings may be constructed in the shop as class projects.

The class should make trips to buildings in the process of construction, observe, and make reports. They should consult with carpenters, contractors, and practical builders.

The different steps in building construction should be preceded by study and explanation of the principles and processes involved, laying particular stress upon the methods used by carpenters in their work. The carpenter's square, rule and level should be taught and used from the trade point of view. All buildings should be constructed from plans and specifications made by members of the class. The builder's interpretation of blue prints should be emphasized.

The following outline is suggestive of points to be covered:

1. Foundations:
    1. Laying out.
    2. Grade line.
    3. Foundations and foundation materials.
    4. Forms for concrete walls.
    5. Basement frames.
2. Main frame:
    1. Methods of framing superstructure.
    2. Sills and girders.
    3. Bridging.
    4. Trimmers and headers.
    5. Walls, partitions, floors.
    6. Openings in framework.
3. Roof framing:
    1. Common rafter.
    2. Ridge piece.
    3. Hip and valley rafter.
    4. Jack rafters.
    5. Framing by means of protractor.

4. Exterior covering and finish:
    1. Sheathing.
    2. Scaffolding.
    3. Cornice.
    4. Shingling.
    5. Setting window and door frames.
    6. Siding.
    7. Painting.
5. Interior finishing:
    1. Lathing.
    2. Interior walls.
    3. Stair building, porch steps.
        a. Risers and treads.
    4. Porches.
    5. Setting door jams.
    6. Fitting window sashes.
    7. Planing trim.
    8. Hanging doors.
        a. Fitting
        b. Hinging.
        c. Fitting locks.
    9. Planing windows.
    10. Laying and scraping floors.
    11. Interior decorating.
6. Estimating:
    1. Methods of estimating.
    2. Estimating lumber quantities.
    3. Example form for bill of materials.
    4. Estimating labor costs.
    5. Estimating quantities of nails.
    6. Example of form for carpentry costs.
    7. Total building costs.

ELEMENTARY ELECTRICITY

This course should be of much practical value to pupils who elect to follow it. The scope of the work undertaken will vary with conditions existing in different communities. The instructor will find much in the community at large to make the work interesting and beneficial.

Following are suggestive activities:

Soldering operations:
1. Splicing wires.

Batteries:
1. Kinds and uses.
2. Connections: Series, parallel.

Wiring:
1. House wiring problems.
    a. Underwriter's regulations.
2. Bell circuits.
3. Use of conduit, loom, insulation, etc.

Electric equipment and machines:
1. Motors and generators.
2. Commercial lighting.
3. Gas engine ignition.

SHOP EQUIPMENT—WOODWORKING TOOLS

Individual Equipment.

		Approximate price
1	bench 21x52x32 with quick action vise	$12 to $20.00
1	12 in. back saw, Atkins or Disston	1.00
1	6 in. try square	.30
1	marking gauge (Stanley No. 18)	.25
1	2 in. single-fold rule (Stanley No. 18)	.40
1	firmer chisel, 1 in.	.35
1	firmer chisel, ½ in.	.25
1	firmer chisel, ¼ in.	.20
1	bench brush	.40
1	jack plane (Stanley No. 605)	2.75

General Tools.
(Based on class of 12 pupils.)

6	hammers, 16 oz. each	$ .60
6	hickory mallets	.25
4	spoke shaves (Stanley No. 64) each	.35
2	sets auger bits, ¼ in. x 1 in, incl., per set	3.50
3	ratchet braces, 10 in. sweep (Stanley No. 945), each	.85
3	countersinks (Stanley No. 18), per dozen	1.75
1	draw-shave, 8 in. blade	.45
2	rip saws, each 24 in.	1.25
2	oil stones, 2x6 in.	50 cts to 1.00
2	crosscut saws, 26 in., each	1.25
2	steel oilers, each	.25
1	mitre box with saw	$9 to 12.00
1	saw vise	1.25
1	saw set	.75
1	emery grinder	$3 to 12.00
2	pairs pliers, 6 in., each	25 cts to .75
1	pair snips, 10 in.	80 cts to 1.00
2	Yankee automatic drills, each	1.25
2	screw drivers, 6 in., each	.25
4	screw drivers, 4 in., each	.20
6	nail sets, per doz., asstd.	.85
2	spirit levels, 20 in. or 24 in., each	2.00
6	files, three-cornered, 6 in., per dozen	.95
6	hand screws, Jurgerson, 12 in., each	.50
6	5 ft. steel bar clamps, each	2.25
6	5 ft. steel bar clamps, each	1.75
3	6 in. T bevels	.30
4	6 in. wing dividers, each	.18
1	expansive bit, 1½ to 3 in.	1.00
2	compass saws, each	.80
3	¾ in. gauges, each	.40
6	scrapers, assorted, each	.10
6	wood files, half round, 10 in., each	.45
1	set chisels, ⅛, ½, ¾, 1¼, 1½ in.	2.15
3	steel squares, 18x24, No. 14, each	1.50

Band saw, turning lathes, surfacer, etc., as finances will permit.

SHOP EQUIPMENT—ELEMENTARY ELECTRICITY
(For twelve pupils.)

3 1½ lb. soldering coppers.
1 electrician's blow torch with rest for soldering copper.

3 tin snips.
2 hand drills.
1 doz. each 1/16 in., ⅛ in., 3/16 in. straight shank drills.
6 4 in. screw drivers—all wood handles.
6 8 in. screw drivers—all wood handles.
12 6 in. side cutting electricians' pliers.
6 electricians' claw hammers.
3 carpenters' bit braces.
1 set wood bits, 3/16 in. to 1 in.
3 extra ⅝ in. wood bits.
1 18 in. auger bit extension.
1 B. & S. wire gauge.
12 "National Electrical Code" rule books.
6 dry cells.
6 electric door bells.
6 2-point push buttons.
6 rules.
12 files, 4 in. to 10 in.
2 hack frames and saws.
6 center punches.
1 wrench.
1 machinists' square and scale.

HOUSEHOLD ECONOMICS

The number of units of credit to be offered in this field will vary with the school, from one-half unit in sewing to a maximum of two units in household economics, divided as may seem desirable along the lines herein suggested. The work in any given school may be of a type to suit the desire of the community and the local board of education. A school may be able to offer a short course in sewing when it could not afford to offer more extensive courses in household economics.

The method of offering the home economics courses may also vary, but it is recommended that one of the following plans be adopted:

(a) A term (eighteen weeks) in foods, followed by a term in clothing, or vice versa, eighty-minute periods five days per week to be utilized as seems most advisable to the teacher in charge, following the suggestions made in the syllabus, will give one unit of credit. Schools offering two units of work may then arrange the time to the best advantage, giving the foods one year in the spring term and the next year in the fall term, or vice versa, in order to adapt the work to the seasons. When this plan is used, it seems best to start the work with a term of sewing.

(b) A full year of foods or of clothing, eighty minutes per day, five days per week, will give one unit of credit. When this plan is used it seems best to offer the work in clothing the first year.

The following syllabus is abridged from the course of study for the State of Kansas. The work outlined is more extensive than can be completed by schools offering two units of work and

selections will need to be made. Schools which offer but one year of household economics devoting one semester to cooking and one to sewing will be forced to eliminate at least half of the work outlined. The syllabus contains a course in shelter and house management which is not intended to be treated as a separate study but which is to be correlated with the course in cooking and sewing as opportunity affords and without additional credit.

COOKING

1. Problem:

   How can I make my work easier in the kitchen?
   What utensils will be needed for my work?

   Laboratory:

   Clean and arrange equipment in desks and cupboards.
   Directions for care of sinks and supply tables, etc.
   Clean refrigerator.

   Recitation:

   Equipment—construction and care of different pieces of equipment.

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2. Problem:

   How much does it cost me to run my coal range an hour?
   Is it more economical to cook with coal, gasoline, electricity or oil in my community?
   Which fuel gives me the best results?

   Laboratory:

   Examine range and gas burner.
   Regulate mixer of gas burner.
   Examine electric plates and oven.
   Build and regulate fire.
   Read electric meter:
   Calculate cost per hour.
   Make working drawings of range.

   Recitation:

   Fuels—Kinds and classes; value of different fuels—calorific, economic, as to convenience; essentials of combustion; kindling temperature; products of combustion.

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3. Problem:

   Why is an abundant supply of water necessary for my kitchen?
   What must I know about plumbing fixtures?
   Why is it that in some waters a good lather can never be made?
   What processes can we use to soften hard water in the home?

   Laboratory:

   Experiments to show effect of heat on water.
   Experiments to determine substances in solution and suspension—change the boiling temperature of water.

Experiments to determine the effect of foreign substances on melting and freezing point of a solution.
Make a fruit ice.
Soften water for cleansing.

Recitation:

Water—Sources; kinds and composition; uses—as cleansing agent, as medium in cooking, in body.

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4. Problem:

Why are beverages considered harmful?
How may tea and coffee be prepared to render them the least harmful?
Why are cocoa and chocolate better beverages for children than tea and coffee?

Laboratory:

Make tea and coffee.
Compare steeped and boiled tea.
Compare boiled and percolated coffee.
Fruit drinks.

Recitation:

Beverages—Tea, coffee, cocoa; composition methods of preparation; physiological effects.
Fruit drinks—Value in diet; kinds.

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5. Problem:

Will it be more economical for me to make or buy my candies?
Why is it that commercially made candies have a more uniform texture than homemade candies?
Why is it that some football coaches serve the players a cup of black coffee with four lumps of sugar in it before they enter the game?

Laboratory:

Make syrup test to determine temperatures.
Make peanut brittle, and possibly some other candies.
Compare cost of homemade candy and purchased candies.
Compare maple sugar, beet sugar, cane sugar.
Burn sugar completely, watching changes.
Trip to candy factory or kitchen.

Recitation:

Sugar—Sources, kinds, composition; manufacture; properties; effect of heat; effect of acid; value as food.

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6. Problem:

Why is it that the evaporated fruits retain their natural color better than dried fruits?
Why is it that fruit is such an important food in the diet of a vegetarian?

Laboratory:

Prepare a fresh and a dried fruit.

Recitation:

Fruits—Composition and value as food.
Process of preparing. Fresh dried.

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7. Problem:

What is the effect of heat on starch?
How can a starch and a liquid be combined to make a smooth mixture?
From what source do we obtain starchy food?

Laboratory:

Collect samples of starchy preparations.
Report upon home cookery of sago. tapioca, and macaroni.
Test different foods for starch.
Experiments to determine solubility of starch in hot and cold water.
Experiments to show methods of combining starch with a boiling liquid.
Prepare white sauce.
Experiments to compare thickening power of browned flour, flour, and cornstarch.
Examine cooked and uncooked starch grains under microscope.

Recitation:

Starches—Characteristics; structure of starch cell; difference in starch cells; properties; effect of heat; effect of acid.

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8. Problem:

How can we cook green vegetables to retain their mineral salts?
How does the cookery of winter vegetables differ from the cookery of green ones?
What should I know about the composition of vegetables to select suitable ones for winter use?
How can we cook strong vegetables so the flavor will be improved and the appearance unchanged?

Laboratory:

Illustrate different methods of preparation.
Illustrate use of white sauce for different purposes.

Recitation:

Vegetables—Composition; classed according to — parts used, composition, flavor. Methods of cooking; digestion and food value.

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9. Problem:

What directions should be given for the cooking of cereals?
Why is it that some cereals take so much longer to cook than do others?
How does the manufacture of ready-to-eat cereals differ from the so-called uncooked and partially cooked ones?
What cereal can be used as a vegetable?

Laboratory:

Cook cereals: Different kinds; Different methods. (Compare.)
Make collection of cereal grains.
Make collection of prepared cereals.

Recitation:

Cereals—Composition; kinds; manufacture; value as food; effect of different methods of cooking on flavor and digestion.

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10. Problem:

How may foods be cooked in fat and have them both palatable and wholesome?
Why is the prejudice that many people have against fried foods justifiable?
What is the most economical fat for frying?

Laboratory:

Render fat. Experiments to determine temperatures for frying cooked and uncooked foods. Clarify fats.

Recitation:

Fats: Composition; kinds, sources; value as food; effect of heat; economy in the use of fats; cost of various kinds; butter and lard substitutes.

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11. Problem:

What is it about milk that makes it so valuable for children to drink?
What precautions are necessary to keep milk sweet and safe for use?
When it is impossible to obtain fresh milk, what can be used?

Laboratory:

Compare scalded and boiled milk.
Investigate school and home supply of milk.
Pasteurize and sterilize.
Demonstrate cleansing milk utensils.
Make cottage cheese.
Make junket.

Recitation:

Milk: Composition; value as food; effect of heat; effect of rennet and bacteria; care of milk; milk as found in market; certified, modified, condensed, etc.

12. Problem:

How much importance must we give to the use of cheese and butter in our diets?
With what foods should cheese be combined?
Why is it that the Italians can live so largely on macaroni and cheese?
Is it wise to use or sell butter substitutes?

Laboratory:

Experiments to show effect of heat upon cheese.
Make macaroni and cheese.

Make rarebit.
Make souffle.
Make butter. Compare with butter substitutes.

Recitation:

Milk products—Cheese: kinds; composition; manufacture; food value; digestibility; care of cheese.
Butter—Methods of preparation; substitutes.

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13. Problem:

Why are eggs used so largely in a child's diet?
What is the difference between soft cooking and soft boiling an egg?
Should the price of eggs influence their use?

Laboratory:

Cook eggs different ways.
Experiments to show effect of salt and acid on albumen.
Determine cost of egg dishes with different priced eggs.

Recitation:

Eggs—Composition; value as food; structure; preservation; effect of heat; economy in use; relative value of fresh and preserved eggs; cause of spoiling of eggs; digestion.

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14. Problem:

What use may we make of the thickening power of eggs in making desserts?
What measure of flour is equivalent to the thickening power of one egg?
One yolk? One white?

Laboratory:

Make custards—Custard variations: Chocolate; Fruit; Caramel; Frozen; Baked; Steamed.
Make omelets.

Recitation:

Milk and egg combinations; the egg as a thickening agent; effect of too high temperature; means of disguising the taste of.

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15. Problem:

Why should meat be cooked?
How does the structure of a piece of meat determine its method of cookery?
By what mechanical means can we make the tougher cuts of meat more desirable?
What should I know about meats so that I am sure of getting the cuts I order from the market?
How much meat should I eat in my regular diet?
How can I economize in buying meat?

Laboratory:

Experiments to show constituents and characteristics.
Draw animal to show location of cuts.

List cuts of meat according to price.
Preparation of various cuts.
Use of left-overs.
Combine vegetables with meats.

Recitation:

Meats—Structure; composition; food value; selection of meat; conditions that affect quality; flavor of meat; effect of heat; reasons for cooking meat; methods; preservation of meats; cost of meat; food laws governing supply; meat substitutes.

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16. Problem:

To what extent is it wise to substitute the vegetable protein for the protein of meat?

Laboratory:

Prepare baked beans.
Prepare lentil soup.
Prepare salted peanuts.

Recitation:

Legumes and nuts — Composition; structure; value as food; digestion; kinds; cost.

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17. Problem:

From what source do we obtain gelatin?
What is the difference between jello and gelatin?
Why should I not form the habit of serving only gelatin desserts?

Laboratory:

Experiments to show solubility in hot and cold water.
Prepare—Lemon jelly; gelatin from meat and bone.
Compare with ready to use gelatin preparations.
Prepare gelatin; with fruit juice; with fruit pulp; with fruit or nuts; with fruit cream or egg whites.

Recitation:

Gelatin—Source; commercial preparation; properties; composition; value as food.

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18. Problem:

What is the purpose of leavening?
What are the different leavening agents?
What are some of the objections to the use of soda?
Why are some baking powders objectionable to use?
Why has the prejudice grown so strong against the use of quick breads?
Is it the temperature of the bread or the texture of hot bread that makes it harder to digest?
Why do we use different classes of batters and doughs?

Laboratory:

Experiments with flour to illustrate the presence and characteristics of starch and gluten.

Experiments to show action of various leavening agents when combined with liquid.
Prepare sponge cake and popovers; prepare griddle cakes; prepare waffles; prepare muffins.

Experiments to show action of soda and molasses.
Prepare gingerbread.

Experiments with soft doughs.
Make biscuits, doughnuts, or cookies.

Recitation:

Batters and doughs: Flour — composition, kinds and classes, manufacture.
Leavening agents — kinds and classes, properties, products of fermentation.
Classes of batters and doughs; oven temperature and baking. Digestion and food values. Value of batters and doughs. Comparison of various leavening agents as to digestibility, food value, healthfulness, economy of time, effort, expense.

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19. Problem:

What are the requisites for good bread?
What kind of flour is best for bread?
What change takes place in bread during baking?

Is it more satisfactory to make or buy the bread for family use?

If I am buying food at the bakery, what can I get that will give me the most for my money?

How does the cost of homemade dishes compare with the same foods bought at the bakery, grocery, or delicatessen shop?

Laboratory:

Make wheat bread by short and long process.

Recitation:

Yeast bread—Methods of making; materials used; manipulation.
Baking: Temperature; changes produced.
Care of bread; value as food; digestion.

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20. Problem:

Is the food value of salads great enuogh to warrant the time spent in preparing them?

Should salads be considered a luxury or necessity?
What are the characteristics of a good salad?

Laboratory:

Select and prepare materials for salads.
Make dressings.
Attractively combine.

Recitation:

Salads—Value in diet; preparation; kinds; cost.

21. Problem:

Why do some fruits jell better than others?

What methods can I use to save fruits and vegetables for winter use?

How does the pure food law protect us when buying canned goods?

Why does fruit spoil?

Is fruit put up at home cheaper than that commercially canned?

What should I know about the brands of commercially canned fruits and vegetables in order to buy them intelligently?

Laboratory:

Can fruits and vegetables under different methods.
Make preserves and pickles.
Make jellies, jams, and butters.

Recitation:

Canning and preserving. Decay of fruits and vegetables: Causes; means of prevention; methods of preservation; harmful preservatives; comparison of fresh and preserved fruits and vegetables as to—quality; cost.

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22. Problem:

What must I know about foods to be able to intelligently prepare a meal at home?

What could I prepare for luncheon at a cost of 20 cents?
How shall I care for the baby's milk?
What are the first foods I may give a child?
What are suitable refreshments for a reception?
What shall we serve at our Mother's Tea?
What quantities will we need for twenty guests?
What kinds of food do I, a high school girl, need?
How much do I require each day?
What shall I put in my 8-year-old brother's lunch box?

What can I learn to make at school that I can serve at home for Thanksgiving dinner?

Laboratory:

Weigh and measure 100 calorie portions of different foods.
Compute 100 calorie portions of several foods.
Calculate from dietary tables the number of calories each member of a given family requires for a daily diet.
List foods rich in protein, fat, carbohydrate, and mineral content.
Visit markets.
Study labeling.
Compare cost of foods purchased in small and large amounts.
Plan meals suitable for breakfast, luncheon, dinner, supper.
Plan meals for definite sum.
Plan meals with special reference to economy of time, labor, fuel.

Plan meals for aged, young, various types of illness.
Plan, prepare, and pack lunches for school child, laboring man.

Recitation:

Selection of food materials for menus; methods of measurement of fuel value of foods; food requirements as influenced by age, etc.; dietary standards; cost of food; conditions which affect cost; methods of purchase; marketing; means of reducing cost; planning of meals; study of principles underlying the making of menus; suitable combinations; variety, etc.; esthetic considerations; meals for different seasons, occasions; meals for sick and convalescent.

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23. Problem:

What must I know about the different styles of table service and table etiquette to serve my meal correctly?
How will my knowledge of art help me to serve meals attractively?
How can the enjoyment of a simple meal be increased?

Laboratory:

Prepare meals for different occasions.
Set table for various kinds of meals.
Serve meals of various kinds.

Recitation;

Preparation and service of meals; styles of service; accepted rules for service—with maid, without maid; table etiquette; plan of work as to economy of time, labor, and fuel.

SEWING

1. Problem:

What must I know about clothing in order to dress in good taste and appropriately to all occasions?
What must I know to help make my clothes?
What equipment is necessary for the sewing room at home?
What must I have to equip my work box?

Laboratory:

Review of stitches on small articles as needed to give practice in making the larger article or garment. Stitches; seams; fastenings; lace and embroidery matching; cutting and joining bias; gussets; plackets; darning and patching.

Recitation:

Study of equipment used in sewing: Location and furnishings of sewing room; selection of equipment to conserve health and time of worker; cost of outfit; true economy in buying; study of individual equipment; study of sewing table; study of sewing chairs; aprons; pressing boards; sewing machines.

2. Problem:

What should I know about buying cotton and linen?
How can I tell at the store whether a tablecloth is pure linen, is adulterated with cotton, or is mercerized cotton?
Why is the price of materials not always a safe guide in buying?
How can I use my knowledge of fibers to help overcome the objection to a pure textile law?

Laboratory:

Microscopic, chemical, and physical examination of cotton and linen fibers.
Collection and comparison of samples.
(Work begun and continued throughout the year.)

Recitation:

Textiles (cotton and linen fibers): Value of knowledge of fibers to purchaser. Methods of adulteration. Need of textile legislation. Study as to origin, cultivation structure, varieties; preparation for market. Purpose, durability, relative cost, good taste. Comparison of materials. Ready made versus homemade as to making, wearing, and cost.

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3. Problem:

Laboratory:

Making of following:
a. Holder made of crash or hand towel.

Recitation:

Points to be considered in selection of materials: Use of holders; design of holders; care of holders.

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4. Problem:

What is a suitable design for a work apron?
What materials might be used for it?

Laboratory:

b. Apron.

Recitation:

Uses and kinds of aprons; selection of design; selection of material; care of aprons; repair of garment.

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5. Problem:

Of the various articles of clothing that I need, what can I make at school so that the cost of my wardrobe shall be reduced?

Laboratory:

c. Kimona (commercial pattern).
d. Kimona sleeve nightgown.

Recitation:

Proper use of negligee garments.
Ready-made versus home-made garments.

6. Problem:

With my present ability and need, what undergarments can I make that will be serviceable for me?
Why will it be more economical for me to make my own undergarments than to purchase them ready made?
What must I know about the sewing machine so that I can use it as it should be used?

Laboratory:

e. Corset cover (commercial pattern).

Recitation:

Discussion of styles as to beauty, utility, and health.
Selection of materials.
Relative value of trimmings.
Lace and embroidery.
Handmade versus machine made.
Time required in laundering and care.
Comparison of cost with readymade garments.
Use of machine attachments.

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7. Problem:

What materials are most suited for undergarments?
Is it necessary to shrink all wash material before making up?
How can I help better the conditions under which the readymade garments are made?

Laboratory:

f. Drawers (plain or circular drafted pattern).

Recitation:

Discussion of styles.
Hygiene of underwear.
Comparison of kinds of underwear.

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8. Problem:

When is it economical for us to make the trimmings for our underwear?
What principle in design will guide us in determining the depth to make petticoat flounces?
Why is it an advantage to be able to make our own patterns?

Laboratory:

g. Petticoat (drafted pattern).

Recitation:

Design as related to line and proportion.
Design as related to beauty, utility, and health.
Selection of material.
Economy of material.

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9. Problem:

What type of dress is best suited to my needs?
What material would be best for this style?
How much can I afford to spend for a dress?

Can I buy it ready made as cheaply?
How much material will I need?
What type of dress is meant by the term "sporting costume?
When should it be worn?

Laboratory:

h. Shirtwaist (drafted pattern) tailored cuffs and band or original collar and cuffs.
i. Middy (commercial pattern).

Recitation:

Style of waist considered as to beauty, appropriateness
Suitable selection of materials for waists.

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10. Problem:

Which is preferable, light or dark materials for work dresses?
Why do we prefer cotton to wool for house dresses?

Laboratory:

Collect and combine fabrics and trimmings suitable for morning dresses.
Making of an original design or the adaptation of a selected design.
Drafting pattern or adapting commercial pattern.
j. Morning dress (commercial pattern).

Note: Require three of the first six.
Require either "h" or "i."
Require "j."

Recitation:

Principles of color, line, and proportion.
Application of principles to design of dress.
Suitability of design as related to utility, comfort, and time spent in laundering.

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11. Problem:

What should I know in order to care properly for woolen and silk garments?
How do you account for the "rustle" in some silk petticoats?
How can I keep my wool dress from water spotting and shrinking?

Laboratory:

Microscopic, chemical, and physical examination of wool and silk fibers.
Tests for adulteration.

Recitation:

Study of fibers (wool and silk): Origin, structure, comparison of varieties, and preparation for market of wool and silk.
Methods of adulteration.

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12. Problem:

How is woolen material more serviceable for school dresses than the heavy cotton fabrics now on the market?

What should guide us in the selection of our clothes?
What can I do to my last year's dress so I can wear it again this season?
What advantage would there be in designing my own patterns?

Laboratory:

Make ink or water-color design suitable for wool dress. (May be done in correlation with drawing department.)
Make a wool dress or a wool skirt and separate silk waist.
Select and combine wool and silk fabrics suitable for dresses for different occasions.
Note width and cost.

Recitation:

Review of principles of color and line in relation to human coloring and form.
Suitability of clothing to different occasions.
Selection of materials.
Dress accessories.
Ornamentation versus decoration.
Influence of color upon individuals.
Adoption of commercial patterns.

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13. Problem:

What do we mean by saying clothes are in good taste?
What must I know and do in order to select and purchase clothing that will serve as adornment as well as protection?

Laboratory:

Make a lingerie dress, household or personal article that may be designed and decorated.

Recitation:

Discussion of principles of art in color and design as applied to needlework.
Selection of materials.

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14. Problem:

How can I be sure, when buying a hat, that it is suitable, appropriate, and becoming to me?

Laboratory:

Plan hat to suit face, figure, and costume.
Renovate materials.
Make and trim simple hat.
Plan and figure cost of a suitable wardrobe for a high-school for one year.

Recitation:

Study of materials used in millinery.
Note: Where desirable and practicable, millinery may be included to give further development of skill and judgment in selection of clothing.
Discussion of color and line in relation to the face, figure, and costume.

Style of hat in relation to arrangement of hair.
Criticism of prevailing style.
Selection of materials.
Comparison of cost of materials as contrasted with milliner's price.

SHELTER AND HOUSE MANAGEMENT

1. Problem:

   What has the environment of my house to do with my happiness and development?
   What building materials are best suited for a house in my locality?
   What should I know about the public supply of water in order to conserve the health of our family?

   Laboratory:

   Visit houses in process of construction.
   Make plans for house.
   Examine school and other public systems of heating and ventilation.
   Visit waterworks and sewage plant.
   Study and report on home water supply and sewage disposal.

   Recitation:

   Evolution of the house.
   Location of the house: Environment; site.
   House planning and construction: Structure; plans, materials; systems of heating, lighting, and ventilation; plumbing, water supply; disposal of waste.

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2. Problem:

   What effect does my surroundings have upon my development?
   How am I influenced by pictures and music?
   How can I learn to have a greater appreciation for the better things in art?

   Laboratory:

   Collect samples of paper and other wall materials.
   Demonstration with Victrola to illustrate classes of music.
   Make trip to art shop to see pictures.
   Make trip to stores and factories.
   Combine samples of wood, wall coverings, and textile fabrics suitable for different rooms.
   Plan color schemes for different rooms.

   Recitation:

   Decorating and furnishing: Exterior; interior; floors; walls; ceilings; suitability; cleanliness; artistic effect.
   Furnishings: Use; sanitary aspects; artistic effect.

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3. Problem:

   How much of the care of the home should I be responsible for?

Laboratory:

Clean a room. Clean silver. Clean refrigerator. Remove stains.

Recitation:

Maintenance: Care of the house; source of dirt; ways of removing dirt; materials for cleaning.
Care of furniture and furnishings.
Laundry: Materials used; steps in process.
Household pests.

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4. Problem:

Can the principles of efficiency be applied to housekeeping?
Do I spend more than my share of the family income?

Laboratory:

Spend an imaginary salary for one month.
Report on market prices.
Keep account of family expenses for one month.
Plan work of home for one week.

Recitation:

Organization of the home.
Essentials of a well-ordered home.
Standards.
Management: Division of income; buying; household accounting; system in work.

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5. Problem:

How can I help mother share the burden of housekeeping?
What habits should I form in order to keep well?
Do I know enough about foods to know how to select a diet that is best suited to my needs?
How can I keep from becoming a slave to the dictates of fashion?

Laboratory:

Home problem in some activity of home life.
Report on work of local board of health.
Prepare a lunch basket for a high school girl.
Give an afternoon tea to mothers.

Recitation:

Health interests: Personal hygiene; family hygiene; public hygiene; home nursing—Home nurse and her duties; contagion and infection; emergencies.
Social activities—Social customs and usages.

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6. Problem:

How can I make my home such as to give me the highest physical, mental, moral, and spiritual development?

Recitation:

Aims and results:

Physical well-being.
Mental discipline and development.
Social, moral, and spiritual advancement.

MUSIC

The following activities are recommended for high schools—chorus singing, orchestra, glee clubs, music appreciation. Quotations appearing below in explanation of these activities are taken from the report of the Committee on the Reorganization of Secondary Education, U. S. Bureau of Education Bulletin, 1917. No. 49, entitled, "Music in Secondary Schools."

CHORUS SINGING

This course should be offered to pupils of all years. Although in the smaller high schools it is not practicable to divide the chorus according to years in the school, in the larger schools such division is preferable.

In interest and articulation with the earlier experience of the pupils, chorus practice appeals especially to students in the earlier years of high-school life; but in respect to voices, these years are unfortunate for many pupils, and a wise selection of music material within a limited range is therefore necessary. A careful and frequently repeated examination should be made of each individual voice and each pupil should be judiciously assigned to the appropriate vocal part.

In the upper classes, the voices being more mature, the pupils are able to undertake a higher type of music, involving not only a greater degree of experience in chorus singing but also heavier requirements for the voices. By separating the chorus classes, as suggested, it is possible to develop chorus practice from a type of music easily understood and enjoyed by the immature singers to a type of artistic music requiring a considerable grasp of structure, thematic development, and musical content. * * *

Mere efficient conquering of one song after another, with no thought for comparative musical merit, should not constitute the practice. Correct use of the voice and intelligent phrasing and interpretation of music should be the rule. Further, if the pupils are not yet proficient in sight singing and thoroughly well informed in elementary theory, these should be taught in connection with chorus work. If, however, high-school standards which imply such abilities have been reached, the incidental study should consist of music appreciation. Structural features of the songs should be pointed out and some knowledge of musical form should be gained. Motivation, the phrase, sequences should be studied. Some knowledge of the composers should be acquired, and the use of selections from operas, oratorios, or cantatas should be made the occasion for study of these forms. Every effort should be made to broaden the musical horizon of the student through the medium of his interest and participation in chorus work. * * *

In choosing material for chorus singing it should not be forgotten that, although music may ally itself with sentiments of religion, patriotism, love of home, and so forth, and although it should never ally itself with less worthy associations, it is not to be valued because of such alliance. Music is essentially tone and tonal discourse and is beautiful as music in proportion to the beauty of tone, the beauty of the tonal procedure, and the beauty and nobility of mood out of which it sprang. Music, in short, need express musical thought only. Until this is admitted, understanding of musical beauty as a thing in itself can not be undertaken. Certain old melodies, saved from extinction in the first instance by

alliance with a text of value, and at present by tradition and many hallowed associations, should be preserved as long as their appeal remains and while their use is not wholly perfunctory.

While chorus singing naturally must be the most general and the basic music activity in a public school system, wise administration in this work is more necessary than in any other branch of music study in order to obtain breadth of musical interest and understanding on the part of the students. It is possible for a pupil to sing during his entire high school term the sort of songs that are sometimes sung, study them in the manner in which they are sometimes studied, and come forth at the end of the course as remote from understanding and enjoyment of a Beethoven symphony or sonata as if he had no such practice. Not only does the comparative emphasis usually given the subject and text of songs divert attention from purely musical values, but the physical exhilaration of singing may readily be mistaken for enjoyment of music. Further, the songs may be selected because of their appropriateness to certain occasions, such as class days, field days, arbor days, patriotic festivals, etc., and in such case musical merit usually has to be sacrificed or subordinated.

ORCHESTRA

This study should be offered in all the years of the high school, both in the four-year plan and in the six-year plan. In the latter case it would be wise to plan two orchestras, a junior and a senior orchestra, the one serving as a feeder to the other. When the high school course is four years in length, a grammar school orchestra is desirable for the purpose of developing the younger material for the advanced orchestra of the high school.

The musicianship that results naturally from ensemble playing is more advanced than that which arises naturally from ensemble singing. More hours of practice and preparation are necessary before successful participation is possible; the expression of the musical thought or impulse is less direct than in singing and becomes a matter, therefore, of greater reflection; the mechanical nature of the medium of expression makes sight reading and a knowledge of staff notation more exact; the number and diversity of the orchestral parts—diversity in pitch, tonal quality, and rhythmic procedure—make the whole a richer complex than chorus work presents; and this complexity and variety have attracted composers to orchestral expression of their greatest works. Nevertheless, the course in orchestra must be thorough and well organized to attain its best ends. The following recommendations are therefore urged:

First. The instruments should be played in the manner of their solo capacities, the ideals of chamber music, and the refined treatment of each part in a symphony orchestra being ever kept in mind.

Second. Music should be selected that, however easy, still recognizes these particular values for each and every instrument.

Third. The orchestra should be considered an orchestral class or orchestral study club primarily, and a factor for the diversion of the school only incidentally.

Fourth. Each student should be provided with an orchestra part for home study, and should be expected to prepare his music between the dates of the orchestral rehearsals. This requirement is especially important where school credit is given to members of the orchestra.

Fifth. Instruments should be bought by or for the school, to remain school property, and should be loaned, under proper restrictions, to students who will learn to play them. Instruments such as the double bass, timpani, French horn, oboe, and bassoon should be bought. Only by such means can orchestral richness and seniority be secured, the real Idiom of the orchestra be exemplified, and advanced orchestral literature be made practicable to the students.

GLEE CLUBS

Glee clubs of boys, glee clubs of girls, and glee clubs of mixed voices may, under some conditions, be desirable. In the larger schools there are always students who wish to join these special musical organizations. In schools where attendance on the chorus classes is required, glee clubs are especially desirable, because they afford the better singers the opportunity for a finer type of chorus work than is possible in large classes. Under such conditions it is usually desirable to have the boys' glee club and the girls' glee club act as "feeders" to the senior organization, which should be a glee club of mixed voices.

A question arises whether or not credits should be offered for participation in these clubs. Some teachers believe that all school work should receive school credit, and the glee-club practice coming, as it usually must, outside of school hours, is as worthy of school credit as other school activities. Other teachers prefer not to offer school credits for work in the glee clubs, but to make participation an honor and the work of the club a pleasure for the more musical students. As no outside practice or home study is necessary, these teachers contend that the honor and pleasure should be sufficient incentive for membership in the clubs. The decision of the question of giving credit for glee club membership must rest with the administrative officers of the high school, and this decision, in turn, must be influenced by the type of work done by the glee club and its value in any particular school measured in comparison with the number and value of other music courses for which credit is given in the school.

MUSIC APPRECIATION

The development of music appreciation recommended in connection with chorus practice was incidental, the intention being to prevent an entirely undiscriminating and unappreciative attitude toward music in its "absolute" phases. Such study could not be thorough, even if it were desired to make it so, for the forms presented are in the main comparatively short, are all vocal, and present the easier works of a limited number of composers only, and these probably in vitally altered transcriptions and arrangements. A strong course of study of great musical literature should therefore be offered. This is continually growing more practicable because of improvements in, and the increasing use of, mechanical instruments for reproducing such music, as the player piano, the talking machine, and the player organ. With the help of any or all these and the assistance of local musicians, vocal and instrumental, in addition to what the class and the teacher can provide, working as a chorus and also in solo capacities, a course such as that outlined in the following paragraphs can be presented more or less exhaustively and with results of inestimable value in the education of the students. * * *

The courses of any grade in music appreciation are essentially courses in intelligent listening to music. While they are valuable to those who are looking forward to a deeper study of music, they

should be, as far as possible, of a nontechnical nature, so that pupils who are not planning technical music study may have the opportunity to cultivate discriminating powers of musical enjoyment. The course is best planned, therefore, through the selection of a large number of compositions as subject matter. These compositions should be chosen primarily because of their intrinsic musical worth and secondarily because they illustrate the several viewpoints along which the pupils' attention is to be directed during the listening lesson. These viewpoints may be classified as follows: Musical form, history, biography of musicians, and aesthetics.

(1) They should represent a large number of master composers, ancient and modern, in so far as the works of these masters engage the attention of the world today; (2) they should represent all important media of expression, as piano, orchestra, chorus, solo voice, solo instruments, chamber music, ensembles, etc.; (3) they should represent all varieties of form, as the song forms, sonata form, ronde, etc., and the opera, oratorio, cantata, mass, etc.; (4) as representing either a composer or a form or style, they should be characteristic of that composer or that form or style at his or its best and most individual moments.

The "Progressive Music Series,"—Silver Burdett and Company, has been adopted for use in the elementary schools. Book Four of this series is designed for grade eight but is equally desirable for high school use. Some schools may desire to use the first three books in grades one to eight inclusive and use the fourth book in the high school. This volume contains a large number of chouses, solos, duets, trios, etc. A similar book by the same publishers but designed especially for high schools is the Fourth Book of the "Modern Music Series" by Eleanor Smith. This text is slightly more advanced and contains a larger selection of songs.

For general chorus work and community singing, the following song book is recommended: "Twice Fifty-five Community Songs" (paper) published by C. C. Birchard and Co., Boston.

The following books are excellent for chorus and glee club work:

Levermore: The Abridged Academy Song Book—Ginn & Company.

Baldwin and Newton: Standard Song Classics—Ginn & Company.

Baldwin & Newton: Familiar Song Classics (paper)—Ginn & Company.

Baldwin and Newton: Fifty Standard Hymns (paper)—Ginn & Company.

Baldwin and Newton: Familiar Operatic Classics (paper)—Ginn & Company.

Baldwin and Newton: Standard Patriotic Songs (paper) Ginn & Company.

Chapman-Shiting: The Apollo Song Book (for male voices) Ginn & Company.

THE HIGH SCHOOL LIBRARY

One of the indispensable adjuncts of a high school is a working library; which should contain at least sufficient reference books to vitalize the work of the school; which should grow with the school; and which, in large schools, should constitute one of its most important adjuncts. Where an adequate city library is available the number of copies of books of fiction can be kept at a minimum. However, each school should have a sufficient number to serve the immediate needs of students and to stimulate their desire for reading.

The library of a small school may be kept at the rear of a classroom, if no separate room is available. Chairs and a table should be provided for the use of students. The library of the larger school may be kept in part in the library and in part in the classroom, or entirely in the library room, as may seem best. Such a room should be large enough to be usable and should be open every minute of the day. Schools so situated as to make such a thing practicable should have a magazine table or rack, a shelf for reports and bulletins, a bulletin board, and other accessories.

No school library can function efficiently without good care. School libraries should be under the supervision of a qualified teacher, and one of the teachers of the school should be specially charged with this duty. Responsible pupils can take turns in acting as librarian during certain periods of the day, month or term.

A live library should be accurately and permanently catalogued, preferably according to the Dewey decimal system, and should follow some good card system of library classification.

The shelves should be systematically labelled and the books kept in their proper places. A record should be kept of the books in the library and all accessions from year to year. The accession ledger should show the year of purchase, the accession number of the book, the author, the title, the publisher, and the year of publication, in the order named. On the inside of the front cover of each book there should be placed the accession number and the school stamp. Pupils should never be permitted to take books home without proper record of the loan.

The teacher of every department in the school should study the library so as to know its resources, especially in reference books in their respective subjects; for the character of the reference work depends largely upon the teacher's knowledge of the library and the students' ability to use it.

The selection of books is a work of very great importance and should not be done carelessly or by persons who are ignorant of the needs of a high school library. A very good plan to follow in making accessions to the library is to have each teacher make

note of every book coming to his attention in his field of work that will be of value in the library. These notes can be given to the principal who can in this way accumulate a list of books from which additions can from time to time be made to the library.

It is usually a mistake to buy expensive sets of books. Such sets as a rule contain much material that will never be used by pupils or teachers. Part of the money put into sets is therefore wasted. Money appropriated for books can be much more profitably expended as a rule by purchasing single volumes that will fill a definite need in the library. Even full sets of the works of great writers such as Irving, Dickens, Thackeray, Hawthorne or Cooper are not necessary.

Care should be taken that the books selected are not too heavy or technical for the use of high school pupils. This mistake is especially prevalent in the fields of history, government and science. The most helpful books in history are those that deal with the life of the times and the people studied—their home life, their community life, their social life, and their civic life. Abundance of material should also be provided dealing with great characters of history.

In science there should be a few well selected reference books, but most of the material in this field should deal with sciences as they manifest themselves in the student's surroundings and in his every day life.

The library should contain reference works that will meet all needs for general information that arise in the high school. After one or more good dictionaries, the most necessary reference work is a good encyclopedia. In addition to the dictionary and encyclopedia, there should be at least one good reference work in each of the following fields: general geography, including an atlas; authors, characters in literature; mythology; English words and phrases; foreign words and phrases; synonyms and antonyms; a Bible and a Bible dictionary; great operas and other music masterpices; great pictures and statues; dictionaries of languages taught in the school, and a handbook of general information such as the "World Almanac."

In every high school library there should be a well selected list of magazines. This list need not be extensive, though it should contain at least one oustanding periodical in each of the following fields: current events, current literature, everyday science, sports and young people's activities, nature, home-making and home-keeping, and manual arts.

The following books and pamphlets will be valuable to principals and teachers:

Wiswell: How to Use Reference Works. (American Book Co., $0.80).

Davis and Cowing: Library Aids for Teachers and School Librarians. (H. W. Wilson, Minneapolis, 10c).
Budlong: Plan of Organization for Small Libraries. (North Dakota Public Library Commission, Bismarck, N. D.)
Dewey: Abridged Decimal Classification and Relative Index for Libraries, Clippings, etc. (Forrest Press, Lake Placid Club, Essex Co., N. Y.—$1.50).
The "Certain" Report: Standard Library Organization and Equipment for Secondary Schools of Different Sizes. (Amer. Library Ass'n., 70 E. Washington St., Chicago, 40c. Every school should own a copy.)

LIBRARY LIST

The following list of books is by no means exhaustive. It will be suggestive, however, of desirable reference books in the various fields covered.

GENERAL REFERENCE WORKS

Dictionaries

Webster's New International Dictionary—Merriam.
Standard Dictionary of the English Language—Funk.

Encyclopedias

New International Encyclopedia—Dodd.
Nelson's Loose Leaf Encyclopedia—Nelson.
Ellis: One Thousand Mythological Characters Briefly Described —Hinds.
Frisbee: One Thousand Classical Characters Briefly Described —Hinds.
Hastings: Dictionary of the Bible—Scribners.
World's Almanac and Encyclopedia—Press Publishing Co.

Biography

Adams: Dictionary of American Authors—Houghton.
Adams: Brief Handbook of English Authors—Houghton.
Lee: Dictionary of National Biography—Macmillan.
Thomas: Universal Pronouncing Dictionary of Biography and Mythology, (2 volumes)—Lippincott.

History and Geography

New Imperial Atlas of the World—Rand.
Dow: Atlas of European History—Holt.
Faris: Historic Shrines of America—Doran.
Heilprin: Historical Reference Book—Appleton.
Peck: Harper's Dictionary of Classical Literature and Antiquities—Harper.

Languages

Harpers: Latin Dictionary—American.
Spiers and Surenne: Standard Pronouncing Dictionary of the French and English Languages (School edition)—Appleton.
Smith and Hall: Copious and Critical English-Latin Dictionary—American.

Miscellaneous

Bartlett: Familiar Quotations—Little.
Brewer: Readers' Handbook of Allusions, References, Plots and Stories—Lippincott.
Fernald: English Synonyms and Antonyms—Funk.
Roget: Thesaurus of English Words and Phrases—Longmans.
Wheeler: Explanatory and Pronouncing Dictionary of Noted Names of Fiction—Houghton.
Ryland: Chronological Outline of English Literature—Macmillan.
Whitcomb: Chronological Outline of American Literature—Macmillan.

AMERICAN AND ENGLISH LITERATURE

See lists of classics and suggested books for individual collateral reading by grades under the high school course of study in English.

HISTORY

History of the United States

Andrews: The United States in Our Time—Scribner.
Ashley: American Colonial History—Macmillan.
Bogart: Economic History of the United States—Longmans.
Bryce: American Commonwealth (Abridged edition)—Macmillan.
Brigham: Geographic Influences in American History—Ginn.
Channing and Hart: Guide to the Study of American History—Ginn.
Cheney: European Background of American History—Harpers.
Channing and Lansing: Story of the Great Lakes—Macmillan.
Draper: The Rescue of Cuba—Silver.
Elson: Sidelights on American History—Macmillan.
Fisk: The Critical Period of American History—Houghton.
Fisk: War of Independence—Houghton.
Gregg: The Founding of a Nation—Doran.
Hill: Liberty Documents—Macmillan.
Hart: Source Book of American History—Macmillan.
Hamilton: The Federalist—Dutton.
Hart: Social Forces in American History—Harper.
Halsey: Great Epochs in American History—Funk.
Hitchcock—The Louisiana Purchase—Ginn.
Lodge: A Short History of the English Colonies in America—Harper.
Lippincott: Problems of Reconstruction—Macmillan.
Macy: Political Parties in the United States.—Macmillan.
Muzzey: Readings in American History—Ginn.
Millis: Japanese Problems in the United States—Macmillan.
Parkman: The Struggle for a Continent—Little.
Paxson: The Last American Frontier—Macmillan.
Powers: America Among the Nations—Macmillan.
Roosevelt: Winning of the West—Putnam.
Wright: Industrial Evolution of the United States—Scribner.

Ancient History

Abbott: Society and Politics in Ancient Rome—Scribner.
Ashley: Early European Civilization—Macmillan.
Baikie: Lands and Peoples of the Bible—Macmillan.

Bulfinch: Age of Fable—Dutton.
Church: Story of Carthage—Putnam.
Dill: Roman Society in the Last Century of the Roman Empire—Macmillan.
Guerber: Myths of Greece and Rome—American.
Gulich—The Life of the Ancient Greek—Appleton.
Johnston—The Private Life of the Romans—Scott, Foresman.
Jubb: Greek Literature—American.
Lauciani: Ancient Rome in the Light of Recent Discoveries—Houghton.
Mason: Woman's Share in Primitive Culture—Appleton.
Maspero: Art in Egypt—Scribner.
Rawlinson: Story of Phoenicia—Putnam.
Ragozim: Story of Media, Babylonia and Persia—Putnam.
Sayce: Social Life of the Assyrians and Babylonians—Scribner.
Thomas: Roman Life Under the Caesars—Putnam.

Medieval and Modern History

Adams: Civilization During the Middle Ages—Scribner.
Cheney: Readings in English History—Ginn.
Church: The Crusaders—Macmillan.
Crabites: Armenia and Armenians—Macmillan.
Emerton: Beginnings of Modern Europe—Ginn.
Elliott: During the Reign of Terror—Macmillan.
Firth: Oliver Cromwell and the Rule of the Puritans in England—Putnam.
Fisher: History of the Christian Church—Scribner.
Gilman: The Saracens—Putnam.
Kawakami: Japan in the World Politics—Macmillan.
Kendall: Source Book of English History—Macmillan.
Mathews: The French Revolution—Longmans.
Oman: The Dark Ages—Macmillan.
Seignobas: The Feudal Regime—Holt.
Tappan: When Knights Were Bold—Houghton.
West: Progress of the Nineteenth Century—Harper.

The World War

Ayres: The War with Germany—A Statistical Summary.
Blackwell: The Little Grandmother of the Russian Revolution—Little.
Flowers: What Every American Should Know About the War—Doran.
Hayes: A Brief History of the Great War—Macmillan.
Hungerford: With the Doughboy in France—Macmillan.
Robinson and West: The Foreign Policy of Woodrow Wilson—Macmillan.
Zangwill: The War for the World—Macmillan.

General Works

Baker: History in Fiction—Dutton.
Clodd: The Childhood of the World—Macmillan.
Creasy: Fifteen Decisive Battles of the World.
Freeman: Historical Geography of Europe—Longmans.
Wells: How the Present Came from the Past—Macmillan.

CIVICS AND CITIZENSHIP

Addams: The Spirit of Youth and the City Streets—Macmillan.
Allen: Universal Training for Citizenship and Public Service—Macmillan.

Ashley: The American Federal State; Its Historical Development, Government and Policies—Macmillan.
Boutwell: The Constitution of the United States—Heath.
Bureau of Education: Lessons in Community and National Life—Superintendent of Documents, Washington, D. C.
Beard: Readings in American Government and Politics (Revised edition)—Macmillan.
Bryce: American Commonwealth (Abridged)—Macmillan.
Beard, Mrs. M. R.: Woman's Work in Municipalities—Appleton.
Crown: The Constitution and What It Means Today—Princeton University Press.
Davis and Schwartz: Immigration and Americanization—Ginn.
Federalist: A Commentary on the Constitution. Reprinted from Original Text of Alexander Hamilton—Putnam.
Goodnow: City Government in the United States—Century.
Henderson: The Dependent, Defective and Delinquent Classes—Heath.
Hadley: Standards in Public Morality—Macmillan.
Hart: Actual Government as Applied Under American Conditions—Longmans.
Jenks: Citizenship and the Schools—Holt.
Marriott: Uncle Sam's Business—Harpers.
Riis: The Making of an American—Macmillan.
Roosevelt: American Ideals and Other Essays—Putnam.
Steiner: On the Trail of the Immigrant—Revell.
Van Hise: Conservation of the Natural Resources of the United States—Macmillan.
Willoughby: Territories and Dependencies of the United States—Century.

ECONOMICS AND SOCIOLOGY

Addams: The Spirit of Youth and the City Streets—Macmillan.
Adams and Sumner: Labor Problems—Macmillan.
Bailey: Country Life Movement in the United States—Macmillan.
Clapper: Child Labor in the City Streets—Macmillan.
Carleton: The History of Organized Labor in the United States—Macmillan.
Dealy: Sociology—Its Simple Teaching and Application—Silver.
Ely and Wicker: Elementary Principles of Economics—Macmillan.
Goodsell: History of the Family—Macmillan.
Hays: Introduction to the Study of Sociology—Appleton.
Riis: Battle With the Slums—Macmillan.
Towne: Social Problems—Macmillan.
Wines: Punishment and Reformation—Crowell.
Wells: Recent Economic Changes—Ginn.

BIOGRAPHY

Alger: From Canal Boy to President—McKay.
Barton: The Soul of Abraham Lincoln—Doran.
Bradford: Lee, the American—Houghton.
Bolton: Famous Men of Science—Crowell.
Bolton: Famous American Authors—Crowell.
Bolton: Lives of Girls Who Became Famous—Crowell.
Bolton: Lives of Boys Who Became Famous—Crowell.
Dodd: Woodrow Wilson and His Work—Doubleday.
Ford: George Washington—Small.
Gilman: Roosevelt, The Happy Warrior.

Hapgood: Abraham Lincoln, The Man of the People—Macmillan.
Lant: Pathfinders of the West—Macmillan.
Lodge: George Washington—Houghton.
Lodge: Alexander Hamilton—Houghton.
Lodge: Daniel Webster—Houghton
Meadowcraft: Boy's Life of Edison—Harper.
Morse: Benjamin Franklin—Houghton.
Oman: Seven Roman Statesmen—Longmans.
Tappan: The Christ Story—Houghton.
Thayer: John Marshall—Houghton.
Tarbell: Abraham Lincoln.
Washington: Up From Slavery.

CHEMISTRY

Brownlee and Others: Chemistry of Common Things—Allyn.
Baskerville: Municipal Chemistry—McGraw.
Cohn: Chemistry in Daily Life—Lippincott.
Philip: The Romance of Modern Chemistry—Lippincott.
Todd: Chemistry of the Household—American School of Home Economics.
Rogers and Aubert: Industrial Chemistry—Van Nostrand.

PHYSICS

Adams: Harper's Electricity for Boys—Harper.
Benjamin: The Age of Electricity—Scribner.
Brechner: Household Physics—Allyn.
Burns: The Story of Great Inventions—Harper.
Gibson: The Romance of Modern Electricity—Lippincott.
Hopkins: Home Mechanics for Amateurs—Munn.
Houston: The Wonder Book of Light—Stokes.
Houston: The Wonder Book of Magnetism—Stokes.
Kennelly: Wireless Telegraphy and Wireless Telephony—Moffat.
Rotch: Conquest of the Air—Moffat.

BIOLOGY

Apgar: Birds of the United States—American.
Bailey: Survival of the Unlike—Macmillan.
Burroughs: Birds and Bees—Houghton.
Comstock: Manual for Study of Insects—Comstock.
Furneaux: Life in Pond and Stream—Longmans.
Harwood: New Creations in Plant Life—Macmillan.
Heilprin: The Distribution of Animals—Appleton.
Jordan: Fishes—Doubleday.
Locy: Biology and Its Makers—Holt.
Lubbock: Flowers, Fruits and Leaves—Macmillan.
Lucas: Animals of the Past—Doubleday.
Miller: Little Brothers of the Air—Houghton.
Porter: Wild Beasts—Scribner.
Wallace: Island Life—Macmillan.

PHYSICAL GEOGRAPHY AND GEOLOGY

Archibald: Story of the Earth's Atmosphere—Appleton.
Davis: Meteorology—Ginn.
Dana: Geological Story Briefly Told—American.
Garriott: Weather, Folk-lore and Local Weather Signs—Government Printing Office, Washington, D. C.
Herrick: The Earth in Past Ages—American.

Peary: The North Pole—Stokes.
Russell: Glaciers of North America—Ginn.
Russell: Rivers of North America—Putnam.
Russell: Volcanoes of North America—Macmillan.

HOME ECONOMICS

Aiken: Modern Methods in Nursing—Saunders.
Baldt: Clothing for Women—Lippincott.
Barker: Textiles—Van Nostrand.
Bevier: The House, Its Plan, Decoration and Care—American School of Home Economics, Chicago.
Bevier and Van Meter: Selection and Preparation of Food—Whitcomb.
Carpenter: How the World is Clothed—American.
Carpenter: How the World is Fed—American.
Chambers: A Guide to Laundry Work—Boston.
Clarke: The Care of the House—Macmillan.
Fales: Dressmaking—Scribner.
Farmer: Boston Cooking School Book—Little.
Fish: American Red Cross Textbook on Dietetics—Blakiston.
Kephart: Camp Cookery—Outing.
Kinne and Cooley: The Home and the Family—Macmillan.
Kinne and Cooley: Clothing and Health—Macmillan.
Kinne and Cooley—Shelter and Clothing—Macmillan.
Parsons: Interior Decoration; Its Principles and Practice—Doubleday.
Powell: Successful Canning and Preserving—Lippincott.
Rose: Feeding a Family—Macmillan.
Sheaffer: Household Accounting and Economics—Macmillan.

MANUAL TRAINING

Adams: Carpentry for Beginners—Moffat.
Allen: Manual Training for Common Schools—Scribner.
Bean: Book Binding for Beginners—Manual Arts.
Crawshaw: Problems in Wood Turning—Manual Arts.
Goss: Bench Work in Wood—Ginn.
Griffiths: Essentials of Wood Working—Manual Arts.
King: Inside Finishing—American.
King: Constructive Carpentry—American.
Mitchell: Leatherwork—Manual Arts.
Page: Automobile Questions and Answers—Henley.
Popps: House Wiring—Henley.
Rose: Copper Work—Atkinson.

COMMERCIAL

Altimer: Commercial Correspondence and Postal Information—Macmillan.
Bishop and Keller: Industry and Trade—Ginn.
Bartholomew and Hurlburt: The Business Man's English—Macmillan.
Brown: Principles of Commerce—Macmillan.
Dryer: Elementary Economic Geography—American.
Hall: Writing an Advertisement—Houghton.
Hoover: The Science and Art of Salesmanship—Macmillan.
Huffcut: Elements of Business Law—Ginn.
Osgood: A History of Industry—Ginn.
Owen: Secret of Speed in Typewriting—Forbes.
Tarbell: New Ideas in Business—Macmillan.

CONSERVATION AND THRIFT

American Bankers' Association: Thrift and How to Teach It.
Carnegie: How to Win a Fortune—Forbes.
Clark: Making Both Ends Meet—Macmillan.
Griggs: The Use of the Margin—Huebsch.
Hayward: Money: What It Is and How to Use It—Houghton.
Marden: Stories from Life—American.
McKeever: Teaching the Boy to Save—McKeever.
McKeever: Teaching the Girl to Save—McKeever.
Smiles: Self Help—McClurg.

VOCATIONAL EDUCATION AND GUIDANCE

Allen: The Law as a Vocation—Vocational Bureau.
Allen: A Guide to the Study of Occupations—Harvard University Press.
Batton: Poor Boys Who Became Famous—Crowell.
Beveridge: The Young Man and the World—Appleton.
Bloomfield: Readings in Vocational Guidance—Ginn.
Bloomfield: Youth, School and Vocation—Houghton.
Brewer: The Vocational Guidance Movement—Macmillan.
Clark: The High School Boy and His Problems—Macmillan.
Cody: Commercial Tests and How to Use Them—World Book.
Davis: Vocational and Moral Guidance—Ginn.
Dickinson: Vocational Guidance for Girls—Rand.
Foltz: The Federal Civil Service as a Career—Putnam.
Giles: Vocational Civics—Macmillan.
Gowin and Wheatley: Occupations—Ginn.
Hollingworth: Vocational Psychology—Appleton.
Hungerford: The Modern Railroad—McClurg.
Kimble: Choosing Employees by Test—Engineering Magazine Co.
Jenks: Personal Problems of Boys Who Work—Y. M. C. A. Press.
Lutz: Wage Earning and Education—Russell Sage Foundation.
Marden: Choosing a Career—Bobbs.
Morley: Women Workers in Seven Professions—Dutton.
Norton: A Textbook in Retail Selling—Ginn.
Parton: Captains of Industry (2 volumes)—Houghton.
Ralph: The Making of a Journalist—Harper.
Weaver and Blyer: Profitable Occupations for Boys—Barnes.
Weaver: Profitable Occupations for Girls—Barnes.
Wilson: Working Our Way Through College and University—McClurg.

PHYSICAL EDUCATION

Adams: Indoor Book for Boys—Harper.
Bancroft: Games—Macmillan.
Bancroft: School Gymnastics—Heath.
Dudley and Kellar: Athletic Games in the Education of Women—Holt.
La Grange: Physiology of Bodily Exercise—Strekett, Springfield, Mass.

ART

Batchelder: Principles of Design—Inland Printer, Chicago.
Clement: Painters, Sculptors, Architects, Engravers, and Their Work—Houghton.
Cross: Freehand Drawing—Ginn.

Cross: Mechanical Drawing—Ginn.
Cockerel: Bookbinding and the Care of Books—Appleton.
Dilloway: Decoration of School and Home—Bradley.
Emery: How to Enjoy Pictures—Prang.
Haney: Pencil Sketches from Nature—Atkinson.
Hoyt: The World's Painters—Ginn.
Jack: Wood Carving—Appleton.
Walker: Handbook of Drawing—Scribner.
Whitcombe: Young People's Story of Art—Dodd.

MUSIC

Bender: Great Opera Stories—Macmillan.
Cornell: Musical Form—G. Schirmer.
Elson: National Music of America and its Source—Page.
Faulkner—What We Hear in Music—Victor.
Farnsworth: Education Through Music—Anderson.
Fryberger: Listening Lessons in Music—Silver.
Finck: Songs and Song Writers—Scribner.
Koobe: How to Appreciate Music—Scribner.
Smith: Stories of Great National Songs—Scribner.
Tapper: Goetschius Essentials in Music History—Scribner.
Upton: Standard Light Operas—McClurg.
Upton: The Standard Operas—McClurg.
Wallace: The Threshold of Music—Macmillan.

ALASKA HISTORY AND GEOGRAPHY

Andrews: The Story of Sitka (1922)—Lowman & Hanford.
Arctander: The Apostle of Alaska—Revell.
Bancroft: History of Alaska. (1885)
Cameron: The Cheechako in Alaska and Yukon (1920)—T. Fisher Unwin Ltd., London.
Elliott: Our Arctic Province (1887)—Scribner.
Greeley: Handbook of Alaska (1914)—Scribner.
Golden: Russian Expansion on the Pacific (1914).
Higginson: Alaska, the Great Country (New edition)—Macmillan.
Muir: Stickeen (1909)—Houghton.
Muir: Travels in Alaska (1915)—Houghton.
Sheldon: The Wilderness of the North Pacific Coast Islands (1912)—Scribner.
Sheldon: The Wilderness of the Upper Yukon (1911)—Scribner.
Service: The Spell of the Yukon.
Service: Rhymes of a Rolling Stone.
Stefansson: My Life With the Eskimo—Macmillan.
Stefansson: The Friendly Arctic (1921)—Macmillan.
Stuck: Ascent of Denali—Scribner.
Stuck: 10,000 Miles With a Dog Sled—Scribner.
Tarr: Alaskan Glaciers (1914)—National Geographic Society.
Underwood: Alaska, an Empire in the Making (1913)—Dodd, Mead.
Young: Alaska Days With John Muir—Revell.
Young: Adventures in Alaska—Revell.

Of special interest to Alaska high schools are the following:

A Manual of Fish Culture (Revised Edition), Publication Bureau of Fisheries, U. S. Department of Commerce—Superintendent of Documents, Government Printing Office, Washington, D. C.

Smith, Hugh M.: The U. S. Bureau of Fisheries, Doc. 725, U. S. Bureau of Fisheries, Department of Commerce—Superintendent of Documents, Government Printing Office, Washington, D. C.

Graves: The Profession of Forestry, Forest Service Cir. 207, U. S. Department of Agriculture—Superintendent of Documents, Government Printing Office, Washington, D. C.

PERIODICALS—(EXCLUSIVE OF GENERAL MAGAZINES)

American Educational Review—American Education Co.
Bird Lore—Bird Lore Co.
Classical Review—Ginn and Co.
Education—Palmer Publishing Co., Boston.
English Journal—University of Chicago Press.
Good Housekeeping—Home Magazine Co., New York.
Journal of Political Economy—University of Chicago Press.
Industrial Education Magazine—Manual Arts Press, Peoria.
Industrial Arts Magazine—Bruce Publishing Co., Milwaukee.
Modern Language Notes—Johns Hopkins University Press, Baltimore.
School Review—University of Chicago Press.
School Science and Mathematics—School Science and Mathematics Co.
National Geographic Magazine—National Geographic Society, Washington.
History Teachers' Magazine—McKinley Publishing Co., Philadelphia.
Journal of Geography—Journal of Geography Co., Madison.
School Arts—School Arts Publishing Co., Boston.

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